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Court Rules South Dakota Highway Money Illegally Diverted

By Roger B. Stafford
N. P. N. Staff Writer

CLEVELAND, Nov. 10

SALE of gasoline at retail by the state of South Dakota was stopped because money derived from the tax on motor fuel was being diverted from the purpose to which it had been appropriated in the motor fuel license law.

The legislative act which provided for the application of not more than $100,000 of the motor fuel tax funds to buying gasoline for retail and to establishing a chain of bulk and service stations through the state, was declared unconstitutional by the Supreme Court of South Dakota because it diverted the motor fuel tax funds from their lawful purpose, the construction, reconstruction and maintenance of highways.

No other points were decided, the court deeming the diversion of highway funds sufficient to nullify the gasoline marketing act and to grant the White Eagle Oil & Refining Co. and Independent jobbers a temporary injunction restraining state officials, defendants in two suits, from further activity, at least under existing laws, against the oil industry in the state. This ruling was on a demurrer brought by the defendant state officials.

Two Points Passed By

Two important points raised in the demurrer to the complaint of the White Eagle's suit which complaint was reiterated in the Independent jobbers' supplementary suit, were whether the state was exercising its police power in selling gasoline when certain state officials thought the price of gasoline was too high, and whether the state legislature could enact a statute which would accomplish the purpose of the act just nullified. These were passed by, although the decision indicates that sale of gasoline would have to be provided for in the state's constitution just as other paternalistic and socialistic enterprises in the state have been provided for in the past.

The defendants, Governor Carl Gunderson, Attorney General Buell F. Jones, State Treasurer James L. Driscoll, members of the state highway commission, and State Auditor E. A. Jones, have 30 days in which to file an answer to the petition of the White Eagle and Independent jobbers from the date the temporary injunction was granted, Oct. 28. Whether they will do so is still in doubt.

Dispatches from South Dakota say the governor is anxious to ask the Supreme Court for a rehearing on its demurrer but that Attorney General Jones is satisfied to let the case drop, believing that the court's position and the law are so clear that further litigation would be useless.

Favors Private Enterprise

The Gunderson administration seeks re-election next year and on Oct. 19, nine days before the Supreme Court decided the gasoline case against it, issued a platform upon which it intends to make its 1926 campaign. A significant plank in this platform reads:

"We, the Republicans of South Dakota, believe that the functions of government do not include nor should they admit of the state engaging in private enterprises. We go on record now as standing opposed to the state of South Dakota entering into further business activities. We stand pledged to inject business methods and administration into the activities in which the state is already engaged, giving each one a fair and honest test, with the hope of making a success of each one."

This plank is subject to the approval of the party at a proposal meeting to be held later, but the attitude of the administration seems so well defined in this plank that some observers of South Dakota politics believe agitation against the oil industry may be dropped although at the time the plank was published the state was still selling gasoline to the public.

Other State Failures

Other state enterprises have approximated failures in South Dakota. The state has become deeply in debt and it is yet uncertain whether it can close out its rural credits system without the loss of millions of dollars to the taxpayers. In the Gunderson program the principle of rural credits is indorsed but a different system of administration is necessary to handle the credit funds, it is said. A liability of more than $30,000,000 at the time of the last sitting of the legislature is pointed to. Interest on this liability is more than the income under the rural credits system, it is pointed out in the platform.

It is unlikely, in view of that one great unfortunate step toward paternalism, that the Gunderson administration wishes to take one step further and engage in state socialism by entering the gasoline retailing business.

If the Gunderson administration decides to take the decision of the Supreme Court as it stands and neither file an answer nor ask for a rehearing on its demurrer, it will have considerable gasoline and gasoline handling equipment to sell. Competitive bids must be received for this.

There are reports of attempts to organize co-operating marketing companies to take over the state equipment but these companies would have to compete with other buyers for the state equipment and their operating expenses would be greater than the state's because they could not operate on tax free property and would have to pay other overhead expenses which the state

escaped such as part of the salaries and wages which came from state sources other than the receipts from the gasoline business.

The decision of the supreme court is about 5000 words long and decisions of many courts are cited in substantiating the opinion of the South Dakota court in the White Eagle's and Independent jobbers' suits. The citations cover opinions in other states where cities or states have sought to engage in some enterprise which is plainly the province of private capital.

The White Eagle in its complaint said that the governor and state treasurer met, on or about July 18, on one day's notice by telephone, at a conference unattended by the attorney general, decided that gasoline prices in the state were "unreasonable and excessive" and instructed the highway department to proceed to buy gasoline and sell it throughout the state. The statute providing for the gasoline enterprise specified that the attorney general should be a member of the gasoline commission but that a majority of the three state officials might decide what should be done. It is not stated in the bill of complaint whether the attorney general was ignored or just unable to be present.

Major complaints then set forth were:

1. The state highway commission, acting under the orders of the governor and state treasurer, were about to buy gasoline and equipment for more than 25 bulk and retail stations and to pay for the gasoline and equipment out of the public funds paid into the state treasury from the motor fuel license tax.

2. That the commission threatened to spend $50,000 for gasoline and handling equipment and $40,000 to $50,000 additional in selling the gasoline, and maintaining and operating the state owned stations.

3. That the highway commission was threatening to approve claims for paying for this out of the motor fuel tax fund and that the state auditor was threatening to approve and allow the vouchers and to issue warrants on the treasurer for payments for gasoline and handling equipment.

Its Investment Threatened

4. That the White Eagle for many years has been engaged in producing, refining, selling and distributing gasoline and had 65 bulk and service stations in the state, representing investments of more than $300,000, and that many of the stations were located in communities where the state threatened to compete with it; that its business totaled about 9,000,000 gallons of gasoline annually in South Dakota and was growing, to which growth attached a valuable good will.

5. That the White Eagle was a substantial tax payer, paying the general property tax in South Dakota; that it owned numerous motor vehicles and was paying the state 3 cents per gallon tax used by it and since Oct. 1, 1921, had paid $261,176.77 into the state as a motor fuel license tax and continues to make monthly payments.

6. That the state had sold, was selling, and would continue to sell gasoline for a charge or price no more than the cost thereof to the state plus the cost of handling and contingencies without anything by way of profit; that in such retailing of gasoline defendants would use money raised by the motor fuel license tax, including that contributed by plaintiff, and would conduct the business on premises and in buildings and with the use of property belonging to the state which were purchased and acquired in part for other purposes and paid for with money collected from taxpayers for other purposes; that such business would be conducted and managed in part by officers and employes of the state whose salary and wages were being paid out of funds raised by general taxation; that the inevitable effect of the engaging of the state in the selling of gasoline, as it has engaged in, was engaging and would engage in, would be to exclude from South Dakota the White Eagle and all other persons, firms, and corporations, for the reason that private business and enterprises engaged in selling gasoline could not survive in competition with the state on such a basis, and that the properties, facilities, and money used by the state was and would be exempt from all taxation while the properties, and money employed by the White Eagle and other persons was and would be subject to taxation.

7. That the business would be conducted by persons whose salaries and wages were paid out of general tax money raised even from the White Eagle which meant that the cost and expense known as "overhead" would be less than that of the White Eagle or other persons.

Gasoline Prices were Fair

8. That the prices charged by the White Eagle for gasoline were not and had not been exorbitant nor were they excessive over an amount equal to the cost of the products, plus the cost of handling, overhead, and a fair profit on the capital invested.

Coming Meetings

National Petroleum Marketers Association, Louisville, Ky., Nov. 17, 18, 19.

Indiana Independent Petroleum Marketers Association, Indianapolis, Dec. 9.

American Mining Congress, Washington, D. C., Dec. 9, 10, 11.

American Petroleum Institute, Hotel Biltmore, Los Angeles, Jan. 19, 20, 21.

Michigan Independent Oil Men's Association, Detroit Mich., Jan. 21, 22.

9. That the engaging in a gasoline business by the state officials was without authority of law but was confiscatory of the property and business of the White Eagle without compensation or due process of law, thus violating the constitution of the United States and South Dakota.

10. That unless the state officials were restrained by law they would continue to operate the business with a resultant irreparable loss to the White Eagle company.

In the conclusion it was said the suit was brought in behalf of all others who wished to join in. Five other Independent distributors came in. They were the Mutual Tank Line Co., Aberdeen; C. S. Johns; P. E. Bascomb, Clark County Oil Co., Clark; High Grade Oil Co., Groton, and Timber Lake Light & Power Co. All of these were actively supported by members of the South Dakota Independent Oil Jobbers' Association of which J. H. Cumbow, Sioux Falls, is president and F. H. Buehler, Madison, secretary.

Other Plaintiffs

The complaint in the latter case was similar to that of the White Eagle but further bolstered the action, because all of the parties plaintiff are South Dakota resident taxpayers, while the White Eagle was a non-resident taxpayer. They had asked the attorney general to enjoin the other state officials in the enterprise but he had refused to do so. They charged that they had not been notified the governor intended to hold a conference on the question of state entrance into the gasoline business although they and their businesses were deeply involved. They further charged that the state had already driven a great many retail gasoline dealers out of business by unfair competition by retailing at approximately cost, and that continuance of the state in the gasoline business would drive them and many other oil men out of business.

The state officials demurred offering three reasons:

State's Demurrer

1.—That the court had no jurisdiction of the defendants or the subject of the application or action because the proceeding and action was against the state of South Dakota which had not consented to be sued.

2.—That if the plaintiffs were injured as alleged that such injury was only personal or private and was not such as to call into exercise the original jurisdiction of the Supreme Court.

3.—That sufficient facts were not stated to constitute a cause of action or to entitle the plaintiffs to the relief demanded.

After citing numerous authorities, the court ruled on the first objection of the state officers as follows:

"The distinction between suits against the state and suits against state officers may be expressed as follows: those cases in which the decrees require by

affirmative official action on the part of the defendants, the performance of an obligation which belongs to the state in its political capacity, are suits against the state; while those actions at law or suits in equity maintained against defendants, who while claiming to act as officers of the state violate and invade the personal and property rights of the plaintiffs under color or authority unconstitutional and void, are not suits against the state. In these latter cases, the defendant is sued, not as or because he is an officer of the government, but as an individual, and the court is not ousted of jurisdiction because the defendant asserts authority as an officer of the state.

"To make out his defense, he must show that his authority was sufficient in law to protect him. The gasoline proposed to be sold under the statute in question is the property of the state and as an incident of such property subject to sale by the state when the legislature so provides. The courts cannot interfere with the property interest of the state therein nor with any of the incidents of property, but we think it clear that anyone in custody of the state's property who attempts to sell it without authority of law can be prevented from doing so. The court in preventing an officer or individual from selling the state's property without authority, is not preventing the state from doing so."

Court Had Jurisdiction

On the second objection the court ruled:

"The jurisdiction of the Supreme Court by the constitution is primarily appellate. The original jurisdiction of this court should be assumed when the interests of the state at large are directly involved in the preservation of its sovereign prerogatives or its franchises, in the prevention of its offices from usurpation, intrusion or invasion, or for the protection of the liberty of its citizens, but not to protect private or local rights, except in special cases, when for some peculiar cause application cannot properly be made to a subordinate court.

"The case at bar presents the policy of our state in dealing in gasoline as a commodity, which affects many citizens of the state, not only the parties to this action but many others similarly situated, and widely distributed over the state. It is also apparent that the issues here involved must eventually be decided by the Supreme Court, which we think is a consideration that may properly influence us in determining to assume jurisdiction in an original action. The complaint alleges that the public funds of the state are being diverted and misapplied making it appear that the interests of the state at large are directly involved. * * *

"Generally this court will not exercise its original jurisdiction in such cases unless the action is prosecuted in the name of the state upon the relation or information of the attorney general. However, since the attorney general is a party defendant and refuses to prosecute the action, we think we should hear the suits on the relation of plaintiffs."

The court's ruling on the third clause of the demurrer was, in non-legal language, the knock-out. The plaintiffs alleged that the legislative act providing for the gasoline enterprise violated Sec. 2, Art. 11, of the South Dakota constitution, quoted in the decision as follows:

"Taxes * * * shall be collected and levied for public purposes only."

"Our country has developed under the individualistic theory of government, not socialistic," the court ruled. "The United States and state constitutions and laws have been framed under a policy having primary regard for individual rights." The court then cited a long list of opinions in which the individualistic theory was upheld.

The court then gave opinions of Kansas and Massachusetts courts in which the individual theory was upheld. It then pointed out that the supplying of water and even gas and electricity for a municipality was a public service for which taxes may be levied and that a Maine court even upheld the establishment of a wood and coal yard but that state or municipal participation in oil refining, manufacture and sale of ice, selling coal at retail, establishing and operating a state elevator, loans to working people for the securing of homes, and similar endeavors have been ruled against by supreme courts of other states.

"There is nothing essentially different in the business of retailing gasoline from that of any other commodity," the court continued, "and while it may be conceded that gasoline under present economic conditions is a necessity, there is no reason why it may not be retailed by private enterprise. There is no need of the exercise of the right of eminent domain; it is not contraband as is intoxicating liquor, and no governmental restrictions are placed upon trade in gasoline, as such.

"Private persons have as much right to engage in the sale of this commodity as in the sale of any other useful or necessary article. We are satisfied the state may not enter into the business of selling gasoline and levy and collect taxes to conduct such business unless as suggested by the defendants article 13 of our constitution and especially sec. 1 of said article empowers the state to enter into such business.

Gasoline Like Any Commodity

"Recent amendments to our Constitution evidence a tendency to depart from the earlier fundamentals of our government, and experiment in socialism and paternalism. The state has been authorized to enter into business enterprises, such as the manufacture and sale of cement; the drainage of agricultural lands; the irrigation of agricultural lands; state hail insurance; the manufacture, distribution and sale of electric current; mining, distribution, and sale of coal; the establishing and maintaining of a system of credits to assist in the building of homes; rural credits; and works of internal improvement. In Mackey vs. Reeves, 42 S. D. 345, 175 N. W. 359, we said:

" 'These amendments evidence a fundamental change in the policy of the government, primarily designed to affect and early development of the resources and economic facilities of the state. But they do not evidence an intent to abrogate or modify Article 11, Section 2 of the Constitution which declares that "Taxes * * * shall be levied and collected for public purposes only." This provision clearly inhibits the collection and necessarily the expenditure of public money for private benefit as distinguished from public purposes, * * An appropriation of public money to be constitutional must be for some use or object which directly or indirectly in some degree or manner will materially aid in the proper functioning of some governmental agency, and in so doing will serve a public purpose.'

"There is nothing in any of these amendments to the constitution which can be construed to apply to the sale of gasoline by the state unless it be that portion of section 1, article 13, which says that the state, 'for the purpose of developing the resources and improving the economic facilities of South Dakota * * * may own and conduct proper business enterprises.' It is a well known fact that petroleum and its products including gasoline are not natural resources of South Dakota; that gasoline may be used in the development of the resources of the state is not sufficient to place the business of buying and selling gasoline within the meaning of this provision. If we were to so hold it would lead to a practical removal of all restrictions upon the state to engage in business, since there is

The Best Way to Reduce Station Robberies

CLEVELAND, Nov. 10.—William Harris, sixty-nine, attendant at a filling station here of the Standard Oil Co. of Ohio, last night shot two holdup men who attempted to rob his station. One is dying, the other in the hospital with a bullet wound just below the heart.

Harris did not like the looks of the two men who came to his station late at night. One asked to use the washroom. Harris edged over to the side of the room so that one of the men could not get behind him. As the one came from the washroom, the other pulled a revolver. Harris, who carries a revolver when at the station at night, drew his own gun and fired one shot at this man. Then he wheeled on the second as he was pulling his gun and beat him to the trigger. The police took charge of the affair after that, and Harris caught a street car home, so his folks would not be worried because he was late.

nothing which is not useful and used in activities developing the resources of the state.

"But it is contended by respondents that the act in question is an exercise of the police power. That the purpose of the act is to control and regulate dealing in gasoline by preventing the charging of extortionate prices therefor, and therefore does not violate the provision of the constitution requiring taxes to be levied for public purposes only, since the police power is a public purpose. If this act be an exercise of the police power it may be conceded that the purpose is public, but as we are confronted with another section of the constitution which we think is decisive of these cases, we will not determine whether or not that act is an exercise of police power or whether or not the leislature can enact a law which will accomplish the purpose therein intended. We leave those questions undecided confining ourselves to the constitutionality of the act as enacted.

"Section 8 of article 11 of our constitution provides:

"'No tax shall be levied except in pursuance of a law which shall distinctly state the object of the same, to which the tax only shall be applied.'

"Ch. 225 S. L. 1923 as amended by Chs. 228 and 229 of laws of 1925 levy a tax upon motor fuel and appropriate such tax for highway purposes. The object of the tax provided for in the said Ch. 225 and amendments thereof was to raise revenue for highway purposes by imposing a tax upon motor fuels. The tax is appropriated to the 'construction, reconstruction, maintenance, or repair of highways or roads' under the jurisdiction of the state highway commission. Its title reads:

"'An act to impose of tax upon the sale of motor fuels * * * and for the disposition of the revenue derived therefrom * * *' and the act purports to have no other object than to raise revenue for highway purposes. Ch. 184, S. L. 1925, the act in question, authorizes the use of the motor fuel funds levied and appropriated under Ch. 225 and amendments to enforce Ch. 183. It makes no difference whether its object and purpose be in exercise of the police power or a private purpose, it violates Sec. 8 of Art. 11 of our constitution because it diverts funds levied and appropriated to another purpose.

"We think it entirely clear that the investment of the motor fuel funds in gasoline, oils and lubricants for sale at retail is a diversion of the funds from the highway use to which it was appropriated, to another use. Especially is this true when the funds are invested in permanent fixtures, tanks, and filling stations necessary in the retailing of gasoline. Under this provision of the constitution no taxes raised and appropriated for a special purpose may be used for another purpose.

"For the foregoing reasons the demurrer must be overruled. Defendants are allowed 30 days in which to answer the complaint if they desire to do so, but in the meantime the defendants are enjoined from doing any of the acts complained of in plaintiff's complaint, such injunction to be effective and binding upon the defendants when they are served with a copy of a formal order properly attested and filed in this case.

"Demurrer overruled and temporary injunction order allowed."

Government and Doheny Counsel Argue Bribery Indictments

WASHINGTON, Nov. 7

ANOTHER chapter in the criminal phase of the so-called oil scandal was begun in the local courts this week. Arguments were made on the appeal taken by the government from the quashing court of the District of Columbia of the indictments charging bribery. He quashed them on the ground that Messrs. Pomerene and Roberts, special counsel for the government in charge and control of the prosecution, allowed Oliver Pagen, assistant to the attorney general to be in the grand jury room while the indictments were being voted in violation, attorneys for Fall and Doheny claim, of the statute divesting the Department of Justice of any connection with the prosecutions in the so-called scandal. Arguments were made to the three judges constituting the court of appeals for the District of Columbia.

While the arguments were going on Frank Hogan, attorney for Doheny filed a demurrer to the indictment charging conspiracy, procured after the bribery indictment was quashed, setting up that even if true the things alleged against Doheny and Fall did not constitute any offense against the United States because Fall was without power to make any lease of the Elk Hills naval reserve, or any other lands of the United States.

The demurrer, formal in character, except as to the point of no power on the part of Fall, contains 22 allegations alleging vagueness, indefiniteness and uncertainty in that it did not fairly and sufficiently inform the defendant, Doheny, of what he was expected to meet at the trial; that the statute upon which it was founded did not define a conspiracy to defraud the United States and that the indictment did not allege any facts or particulars showing any conspiracy to defraud the United States in any manner or for any purpose. It further alleged that the agreement which the indictment alleged was entered into between Fall and Doheny could not have resulted in defrauding the United States in any manner or for any purpose.

The day that demurrer was filed the point was made among those who have watched the matter closely that at Los Angeles the government, in its civil suit, contended that the leases and contracts were void because Fall had not the power to make them, but that in Washington it asserts that the things that were done, constituted a conspiracy to defraud the government.

In the arguments on the law question raised by the presence of Oliver Pagen, in the grand jury room, Messrs. Pomerene and Roberts, special counsel argued that the special statute under which they were appointed, enacted at the instance of Senator Walsh of Montana to the end that Attorney General Daugherty might not have anything to do with the prosecution of the cases, merely put them in charge and control of the prosecutions so as to suspend the general law which puts the attorney general or district attorneys in charge of prosecutions and did not forbid them to employ, as their own assistants, men who might also be assistants to the attorney general.

Attorneys for Fall and Doheny quoted from the debates in Congress to show that it was intended to exclude from the prosecution, all members of the attorney general's staff and that when Mr. Pagen entered the grand jury room the law was disobeyed and the indictment vitiated.

If the quashing of the indictments is set aside, it is the plan of the special counsel to press the bribery charge and, in effect, to ignore the substitute charge alleging conspiracy.

Writ Of Error Granted In Texas Tax Suit

HOUSTON, Nov. 6.—Approximately $400,000 in gasoline taxes are involved in the final determination of the case of the state of Texas against the Pioneer Oil & Refining Co., which has been in the courts several years.

Writ of error has been granted by the Supreme Court of Texas, which means that the court will review decisions of the trial court and the third court of civil appeals involving the constitutionality of the first gasoline tax law passed by the thirty-eighth legislature.

The suit was instituted by the Pioneer Oil & Refining Co. of San Antonio in the fifty-third district court of Travis county against the comptroller to restrain the collection of gasoline taxes under the act passed in 1923 on the ground that the law had been repealed by the enactment of another gasoline tax law under which the state is now operating.

In the trial court the case was decided in favor of the state, which held that gasoline taxes were collectible under the first law. The third court of civil appeals at Austin reversed the judgment of the trial court, holding that although the law was valid it had been repealed upon enactment of the second gasoline tax act; and that the state could not collect taxes under a law that had been repealed.

Stabilize Refining by Driving for Profit Rather than Seek Only Volume

By Howard Bennette, Executive Secretary
Western Petroleum Refiners Association, Tulsa, Okla.

THE clearest thinking and straightest talking on what is the matter with the refining end of the oil industry is contained in the following letter which has been sent out to all members of the Western Petroleum Refiners Association by Howard Bennette, executive secretary. Mr. Bennette disclaims sole authorship for the letter, saying all the association staff at Tulsa contributed to it.

Every oil man should read and study this article, whether he is producer, refiner or marketer, natural gasoline manufacturer or supply man, because it hits frankly at the root of faulty business thinking of today. What this letter says should be done in refining, should also be done in the other branches of the industry and in all industries to the end that business be stabilized. By what? By a profit, a real profit, a regular profit, the only kind of a stabilizer that will permit business to live and grow and which will make this country prosper and let its citizens enjoy life.

Read it and then STUDY it.—Editor.

DURING recent years refining as a business has been a distinct failure. The stability necessary to a going and remunerative enterprise has been lacking; the collapse of inventory and production values has played havoc with the balance sheet; and fluctuating periods of feast and famine have undermined the confidence of both consumers and investors in the integrity of the industry.

As a large contributor to such essentials as light, heat, power and lubrication, the refining industry is entitled to a profitable existence.

Primarily, the object of refining as a business is the realization of a profit. The very principle of business demands it be conducted with that end in view. Regardless of the significance of legislation, traffic, technology or other matters which at times divert attention, in the final analysis their importance must be measured by their effect upon the balance sheet. The refiner who fails to subordinate all motives governing the conduct of his business to the single aim of making profits will find that ultimately his ambitions will fall short of realization. He can still dream, but he cannot build, and while he may enjoy the zest of business as much as ever, the time will come when this will be but a memory and one more idle refinery will be added to the list.

Oil Industry Progressive

In many respects the oil industry has been progressive. The dry holes of random drilling have been superseded to an extent by the producing wells of trained geologists; the coal-oil plants of a few years ago have been displaced by the capable refineries of today; while the distribution of finished products at almost every crossroads represents an achievement unexcelled in the commercial exchange of any commodity in any age; yet the refining branch of the industry has lost sight of the primary incentive for its existence and failed to realize the greatest possibilities for prosperity.

Economic necessity grants the refiners a right in business, and the ethics of business grants them a right to profit. Their failure to collect their dues is not through any injustice in the rules but through their failure to act in accordance with the code. Broken laws have taken their toll in penalty; and it is this penalty, recorded among the debits of the industry, that adversely affects the balance sheet.

It is true there have been instances of individual successes among refiners, but these have usually resulted from easy advantages over the less favored, or a diversity of interests extending beyond the limits of a strict interpretation of refinery operation. The refiners as a whole, however, have been less fortunate. During recent years their operations have failed to yield the financial return necessary to their maintenance. Obviously such a situation cannot long continue. They must face that fact and take some action. A spirit of fairness to both investors and consumers demands some explanation of a failure to realize the profit necessary to establish and maintain fair prices and free competition. The same spirit of fairness also demands the immediate adoption of a manufacturing policy based upon something more substantial than the mere illusion of desire.

Needs Education

Ignorance of the law is no excuse, hence self-interest requires a degree of knowledge that will secure the benefits to be derived from the observance of economic laws, and protection from disasters caused by their infringement. The industry needs no formula of a master mind nor miracle wrought by the wand of legislation to destroy evils resulting from its own actions, but it does need within its ranks a campaign of education that will present an analysis of its actions and an interpretation of their effect.

It has been said that the security of the nation is the responsibility of every citizen, and just as truly, the security of the refining industry rests with every refiner. The actions of the industry are but a reflection of the combined judgment of its units and during recent years, this combined judgment has been in error. There must be a re-adjustment of conditions based on a change in policy and this is only possible through co-operative effort. The campaign of education within our midst should lead to a knowledge so convincing that prices are reasonable, that profits will be restored. Prices that contemplate a fair profit require no agreements or illegal combinations between refiners; they do require, however, a knowledge of conditions that of itself points out a plan of concerted action as natural and responsive as the universal desire to seek protection from a storm.

Set Up False Values

MEN have a persistent desire to see things as they want them to be and not as they really are, and usually their business failures can be attributed to over confidence and unwillingness to give full weight to obstacles. The present unsatisfactory condition of most refineries is an eloquent testimony to a spirit that places greater confidence in the effect of an expansion in sales than in the basic principles of business, and ignores both the ability and natural advantages of competitors. The question of how much can be sold regardless of price has superseded the more business-like inquiry of how much can profitably be marketed. Desire, not desirability, is the order of the day.

The intolerable conditions now prevailing cannot be attributed to inherent characteristics of the business of refining. Fortunately, nothing in either nature or business just happens, and in the thought that back of each occurrence will be found contributing causes lies the only hope of the industry for an improvement in its affairs.

The responsibility for the present unsatisfactory condition has been attributed to overproduction, and particularly to the overproduction of gasoline. Fluc-

tuations in the refinery price irrespective of costs of manufacture have been frequent. The demand for gasoline has far surpassed that for other products. This has resulted in adjustments of refinery output to meet the constant changes in requirements of consumers, and while a few years ago for every gallon of gasoline produced two gallons of other products were available for the market, under present refining methods for every gallon of gasoline produced there is a coincident production of but one gallon of other products. The production and sale of gasoline are at present the principal factors contributing to the net return of refineries, and, with an increasing percentage yield from year to year, fluctuations in its price become of greater importance and fluctuations in the prices of other products of less importance. In the following discussion we will, therefore, confine our remarks to gasoline, the product having the greatest influence on refinery profits.

Cause of Overproduction

THE law of supply and demand, which of course controls gasoline prices, contemplates a correlation of these two factors if a reasonable price is to be maintained. Overproduction is the result of a maladjustment of those factors and represents the amount by which supply exceeds demand. As both current output and stocks constitute supply, overproduction may be the result of either current or past operations, or of both combined. If output is normal and stocks excessive, overproduction exists, and conversely, if stocks are normal and current output is excessive, overproduction still exists. It would appear, therefore, that overproduction is the result of an erroneous opinion of the consuming ability of the gasoline market and that any shrinkage in the net return should be attributed to that cause.

An appraisal of gasoline demand must recognize that requirements of the ultimate consumer will limit the market for that commodity. Just so much can be absorbed, and neither the desires of refiners nor price recessions can increase sales against the wishes of the consumer. It is true that low cost may encourage a more extravagant use of gasoline and high cost may encourage the use of substitutes, but neither eventuality is well suited to the best interests of either the consumer or the manufacturer. For competition to educate the public in the belief that a price less than the cost of manufacture, or one that nets less than a reasonable profit, can be maintained, is equally as foolish as it would be for monopoly to attempt to maintain a price that would destroy the market for its output.

What Should Determine Price

While cost of manufacture will not determine, it has a distinct bearing on the selling price by reason of its influence on supply. As price is but an expression of mutual agreement between buyers, with respect to the desirability of exchanging money for gasoline, and sellers, with respect to the desirability of exchanging gasoline for money, before entering into the contract refiners should bear in mind that the desirability of the proposal rests with its effect upon their profit, while their profit rests with the cost of manufacture as well as the price of their product. Irrespective of the cost of crude or whether prices are high or low, refining should be remunerative; however, a proper appreciation of the value of gasoline should never contemplate stability of price, but stability of profit, nor should it contemplate an unfair profit, as an unfair profit is but an invitation to the unfit, whereas a fair profit leaves the field to the efficient.

Unquestionably the refiners have a great responsibility to investors, and, beyond that, also have a responsibility to the consumers of their products; and both require that volume of output in conjunction with stored supply must always be adequate to meet the requirements of the consumer. However, with current output fully capable of meeting the requirements of current demand, there is no reason for ignoring the undesirable expense of excessive stocks, nor failing to recognize the desirable effect of rapid turnover, when both contribute so largely to a determination of the net return from operations.

Effect of Expansion

THERE is another element, however, that must be given consideration—one that is probably as responsible for overproduction and the vanishing profit as improper estimates of demand. This is the desire to expand. There have been many instances where expansion in the operation of an individual plant has proportionately exceeded the increase in demand for products, and where expansion has been fully justified by conditions. An efficiency of management, manufacture or salesmanship that surpasses that of competitors must be rewarded and expansion that results from a superior efficiency can never be condemned.

In most cases, however, where a large number of plants compete, too great a confidence is placed in the desirability of expansion, and mere volume of sales is considered an index of progress. While ambition is commendable, results are more potent than ideals, and profits constitute a more proper measure of success. Often there is feeling that costs per unit will diminish as volume of output increases; therefore, that the enlargement of the scope of the market allowing an increase in production will permit the enjoyment of a larger net return. However, with all striving for the same end, productive capacity overreaches demand and destroys the profits of each and all. Sooner or later cutthroat competition must lead to combinations and monopoly, as a continuance of the practice would result in the survival of the company with the greatest financial resources. There must be a decision between recognition of a limited market, destruction of profits or eventual monopoly.

Again, a refiner in reaching out for an enlargement of his market may have in mind the thought that a large production, permitting manufacture at a low cost per unit, will enable him to drive competitors off the market by underselling, and that, when the enlarged market is secured by the elimination of these competitors, it will remain his by right of conquest. Eliminating the possibility of monopoly, which the law says is illegal, the restoration of a fair profit can only lead to a restoration of competition, and the process of elimination must then be renewed.

In view of the disastrous results of cutthroat competition, it is obvious that there should be some way to restrict the output of refineries in the interest of all. There should be a certain mutuality, not in the physical properties of the refineries, but in the mental attitude of those responsible for their operation. A community of interests must be established that takes no recognition of selfish interests, but recognizes the rights of others to engage in business and receive a fair compensation from their operations.

The marketing of gasoline is a national problem. At the present time refineries are scattered from coast to coast in thirty-one states of our nation. Each refinery and each group of refineries enjoys certain privileges in the way of manufacturing and distributing costs which prohibit the encroachment of competitors upon its market without a sacrifice of net returns. The industry has means at hand for knowing, with a reasonable degree of accuracy, the national demand for gasoline, and with this measure in sight should be in position to regulate production to suit requirements.

Must Consider Statistics

STATISTICS tabulate transactions and present testimony regarding factors that in combination create conditions. They are to the industry what the bookkeeping system is to the individual plant; a record of experience, a statement of facts. All business men are statisticians, consciously or unconsciously, good or bad. No refiner operates without making, and frequently consulting, certain records or statistics of his individual activities. And, it is just as essential that he consult the statistics of the industry of which his plant is but an integral part. The day has long since passed when any refiner can set himself apart and ignore the actions of his competitors. The prices he receives for his products and the amount of products he can sell are not governed by circumstances within his control but are governed by the actions of the industry. Knowledge of conditions within the industry is just as essential as knowledge derived from a study of the records of individual plants. Herbert Hoover recently stated:

"No individual enterprise can succeed if it takes no record of its stock, its volume of output, or sales, the rate of

stock turnover, its prices, assets and liabilities. And it is just as important that the industry as a whole knows these things to function with efficiency."

The greatest value of statistics lies not in the fact that they record transactions of the past but in the fact that they are more than merely descriptive and are suggestive of future occurrences. A plan of action for the future must rely for its soundness on the experiences of the past, and it is from this point of view that statistics are most significant. We must not only consider the figures that are available as a record of past achievement but must also acknowledge that, if reasoning is applied to these figures, we can determine future probabilities.

Suggest Causes and Remedies

LACK of care and judgment may cause figures as well as words to convey an inaccurate picture of conditions. We are all acquainted with the disastrous results and false impressions that may be occasioned by the omission of a word or the misplacement of a comma; and so it is with statistics, the omission of certain figures or their misappliance may lead to false conclusions. However, we should no more condemn statistics for errors of interpretation than we should our language for grammatical errors of an individual. It is only poor workmen who blame their tools, and while our present statistics may lack some features that are desirable, if properly applied, they will furnish the evidence necessary to disclose conditions and suggest remedies for those found unsatisfactory. Unquestionably they offer the industry, again quoting Mr. Hoover, "A counterpoise to psychology in business—an anchor of basic facts to tie to."

If, in seeking the causes responsible for the present condition of the refining industry, certain statements were set forth, few would disagree with either the statements or the sequence of their arrangement.

Failure to realize a profit is due to improper prices prevailing on account of unmarketed production. Unmarketed production is a result of excessive manufacturing. Excessive manufacturing can only be attributed to an incorrect estimate of demand. An incorrect estimate of demand is a result of lack of knowledge and lack of knowledge comes from a failure to examine facts.

The above suggests that there are several things the industry should do and that there is a definite order in which they should be performed: 1. Study conditions; 2. Appraise demand; 3. Regulate production; 4. Restrict inventories; 5. Appreciate the value of its products.

The refining industry, like all nations, is not free from certain units that have little regard for laws intended for mutual welfare. There are probably, therefore, a few in the industry who will always operate in their own way regardless of conditions, regardless of the effect of their actions, regardless of economic laws and without a comprehensive plan of action.

Any commercial enterprise to be successful should base its conduct on some definite plan. Back of every manufacturing program are certain factors that should be considered in formulating such a program and with the adoption of a plan which outlines the course of action, it should be followed to a conclusion with courage and perseverance. Any plan, however, must possess a degree of elasticity that permits alteration with changing conditions, and the program of any manufacturing enterprise should never belittle the intelligence of its customers, its competitors, nor the ultimate consumer of its products. Surely an examination of facts and an adoption of a policy of operations that contemplates an appraisal of demand and a regulation of output based on conditions presents nothing that is improbable of achievement. It offers a way out of the persent maze in which the industry finds itself, a way the industry has never seen fit to travel, and in our opinion the only way to a restoration of vanished profits.

If you controlled the only refinery of the industry, what course of action would you pursue? Would you give any consideration to the consuming ability of your market and just when that market would demand your wares? Would you convert all the raw material you could obtain into finished products regardless of your sales? Would you price these products at so high a level as to make them unattractive to your market and prohibit their sales when suitable substitutes could be obtained? Would you price your products at so low a level that your net return would fail to yield a fair profit from your operations?

Consider Competition

IF there were only two refineries in the Industry and you controlled but one, what course of action would you then pursue? Would you not be called upon to consider and solve the same problems that were encountered when there was but a single plant and in addition would you not be called upon to solve an added problem—that of competition? If your only competitor was a neighbor and operated under conditions identical with you own, would your judgment not grant him a degree of manufacturing and sales ability that would enable him to secure a portion of the market? If your competitor operated at a distant point where conditions were not identical with your own, would you not still grant him the ability to supply a portion of demand, and also give consideration to advantages he might enjoy with respect to serving certain portions of the market by reason of the location of his plant or costs of manufacture? Would you not recognize the fact that marketing areas for the product of both your competitor and yourself would fluctuate as conditions changed unless concessions were made with respect to profit?

Regardless of the number of refineries or their location, basic problems are the same. A determination of the profitable market, and a regulation of production, that give full weight to competition are the vital things to be considered, and, in the final analysis, the problems of the industry are no more intricate than the problems of the single refinery, while problems of individual plants, or groups of plants, have much in common.

It would therefore appear that knowledge of conditions would enforce the adoption of a common policy, or course of action; that a unity of motive, the desire for profit, would demand an examination of facts and an acquirement of knowledge that will suggest a course of action more suited to that motive than present methods of procedure that have failed.

A Plan of Action

AT present the industry finds itself face to face with the necessity for a choice of actions during the coming year. Every situation presents alternatives. Unquestionably there is a right way and a wrong way to proceed; one way leading to success, the other to failure; one way to a profit, the other to a loss. In the preparation of this article we have been actuated by a single motive—that of presenting a plan of action to the industry for its consideration.

That present conditions are unsatisfactory is conclusive proof that somewhere and sometime in the past there has been an error of judgment, a deviation from the proper way. Prudence suggests that we retrace the path and adopt the alternative. We therefore propose that the industry should stabilize profit at the expense of marketing areas in preference to stabilizing marketing areas at the expense of profit.

With the adoption of a correct policy the industry can await with confidence the time, and such time must come, when the proper use of statistics and the the observance of economic laws are recognized as both the duties and the privileges of all refiners; a time when deviations from a fair return will be an unfailing index to the course of action, and the industry will enjoy both the confidence of its public and the prosperity it deserves.

Late Kerosene Change

PHILADELPHIA, Nov. 10.—Atlantic Refining Co. on **Nov. 9** advanced tank wagon price of kerosene 1 cent in Pennsylvania and Delaware to 14 cents.

C. V. Equipment to Exhibit

The list of exhibitors for the N.P.M.A. convention at Louisville, should include the C. V. Equipment Corp., Utica, N. Y. This company will exhibit in booth **139.**

National Petroleum News

Compilation Of Mid-Continent Refinery Operations

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Still Charges Reduced 92,000 Bbls. Below Mid-Summer Peak

Special Wire Service

TULSA, Nov. 10

RECOGNIZING the necessity for curtailing operations because of the seasonal decline of gasoline consumption, which has been accentuated by extremely bad weather, refineries in the Mid-Continent field reduced their still charges sharply during the first week of November.

Reports submitted to National Petroleum News by 124 plants in the Mid-Continent field with a daily still capacity of 460,100 barrels reduced their throughput 24,988 barrels per day to an average of 278,664 barrels.

Still charges for the week were lower than any period since the first week in February. As compared with runs for the week ending Oct. 2, this week's still charges show a reduction of 58,000 barrels per day. Peak runs for the year of this group of refineries were in the middle of July, when average runs were 370,000 barrels per day. Current runs are 27 per cent less than that figure.

Shipments of all commodities except kerosene declined the first week in November, but the smaller production for the week resulted in a reduction in stocks of principal commodities. Shipments of gasoline were reduced 8 per cent to 28,505,600 gallons from all plants, but production was reduced to 26,691,832 gallons, so that total stocks were cut 1,800,000 gallons to 51,231,656 gallons. With the exception of Louisiana and Arkansas plants all groups showed a reduction in gasoline stocks.

Shipments of kerosene virtually balanced with production during the week there being a difference of only 160,000 gallons in the entire field. Total stocks on Nov. 6 were only 14,084,987 gallons.

Stocks of gas and fuel oil were reduced 4,500,000 gallons to 196,914,244 gallons when production was cut 11.7 per cent to 31,967,052 gallons. Shipments for the week were 36,967,052 gallons.

For the four weeks ending Nov. 6 gasoline stocks have been reduced 2,400,000 gallons, kerosene stocks 1,049,000 gallons and heavy oil stocks 14,300,000 gallons. Stocks on hand of gasoline on Nov. 6 represented 13 days' supply at the current rate of shipments, kerosene 17 days and gas and fuel oil 38 days.

Summary for Month

Production and shipments, all reporting refineries for four weeks ended Nov. 6. Change in stocks figured from Oct. 9.

	Gallons
Gasoline	
Production	114,209,387
Shipments	116,615,994
Net change in stocks	—2,406,607
Ratio sales to production	102.1%
Kerosene	
Production	21,876,789
Shipments	22,926,292
Net change in stocks	—1,049,503
Ratio sales to production	104.8%
Gas and Fuel Oils	
Production	143,252,986
Shipments	157,553,887
Net change in stocks	—14,300,901
Ratio sales to production	110.0%

HOUSTON, Nov. 6.—Application has been made by B. K. Goree, receiver for the Home Oil & Refining Co., at Fort Worth, to sell the plant and other properties of this Ranger days promotion company. The application will be heard by District Judge Roy at Fort Worth, Nov. 23.

Mid-Continent Refinery Operations Week Ended Nov. 6 (By Fast Wire)

	Kansas	%Change Previous Week	Oklahoma	%Change Previous Week	No. & Cent. Texas	%Change Previous Week	No. La.-Ark.	%Change Previous Week	Total	%Change Previous Week	Totals Week Ended Oct. 9
No. of Plants	23		46		41		14		124		124
Still Cap. (bbl.)	98,200		165,900		144,300		51,700		460,100		460,100
Da. Av. Crude Run	50,980		80,684		48,643		33,654		213,961		252,481
Da. Av. Other Oils	14,994		22,353		16,157		11,209		64,713		61,044
Da. Av. Total to Stills	65,974	— 5.8	103,037	—13.2	64,800	+ 0.4	44,863	—11.0	278,674	— 8.2	313,525
GASOLINE—Gallons											
Stocks Oct. 30	8,437,943		26,600,789		14,959,708		3,046,984		53,045,424		50,062,254
Prod. 10-30 to 11-6	7,132,069	—10.5	11,069,586	— 4.2	6,023,361	+ 2.7	2,466,816	—10.3	26,691,832	— 5.1	31,219,062
Ship. 10-30 to 11-6	7,646,035	— 7.6	12,603,920	— 9.8	6,196,651	— 3.6	2,058,994	—11.1	28,505,600	— 8.0	27,643,053
Stocks Nov. 6	7,923,977	— 6.1	25,066,455	— 5.8	14,786,418	— 1.2	3,454,806	+13.4	51,231,656	— 3.4	53,638,263
Ratio Sales to Prod.	107.2%		113.9%		102.9%		83.5%		106.8%		88.5%
KEROSENE—Gallons											
Stocks Oct. 30	5,825,939		3,311,562		4,752,482		354,130		14,244,113		15,853,364
Prod. 10-30 to 11-6	1,595,207	— 1.5	1,627,273	—12.7	1,968,821	+41.4	395,324	+15.7	5,586,625	+ 7.0	5,528,959
Ship. 10-30 to 11-6	1,634,570	+ 6.4	1,690,557	—11.3	1,990,090	+16.4	430,534	— 9.9	5,745,751	+ 2.0	6,247,833
Stocks Nov. 6	5,786,576	— 0.7	3,248,278	— 1.9	4,731,213	— 0.4	318,920	— 9.9	14,084,987	— 1.1	15,134,490
Ratio Sales to Prod.	102.5%		103.9%		101.1%		108.9%		102.8%		113.0%
GAS AND FUEL OILS—Gallons											
Stocks Oct. 30	21,027,804		106,346,886		50,528,395		23,402,810		201,305,895		208,295,304
Prod. 10-30 to 11-6	7,159,072	— 1.3	8,013,331	—19.4	7,288,361	—15.0	9,506,288	— 8.8	31,967,052	—11.7	38,884,918
Ship. 10-30 to 11-6	6,582,252	—22.8	10,416,880	—16.2	9,651,317	—31.4	9,708,254	+14.8	36,358,703	—16.4	35,965,077
Stocks Nov. 6	21,604,624	+2.7	103,943,337	— 2.3	48,165,439	— 4.7	23,200,844	— 0.9	196,914,244	— 2.2	211,215,145
Ratio Sales to Prod.	91.9%		130.0%		132.4%		102.1%		113.7%		92.5%

Gasoline Plant Operating Men Meet To Discuss Their Problems

By J. C. Chatfield
N. P. N. Staff Writer

TULSA, Nov. 7

NATURAL gasoline plant operators in three Oklahoma fields held meetings during the past week to discuss the problems which they encounter from day to day in their work. Meetings were held in the Tonkawa, Garber and Burbank fields on Tuesday, Wednesday and Thursday under the auspices of the Association of Natural Gasoline Manufacturers.

As in the case of previous meetings held in the field a year ago plant operators displayed a keen interest in their problems. A lively discussion followed the presentation of various subjects. In addition to men brought in from other fields discussion was led at Tonkawa by operators in that field.

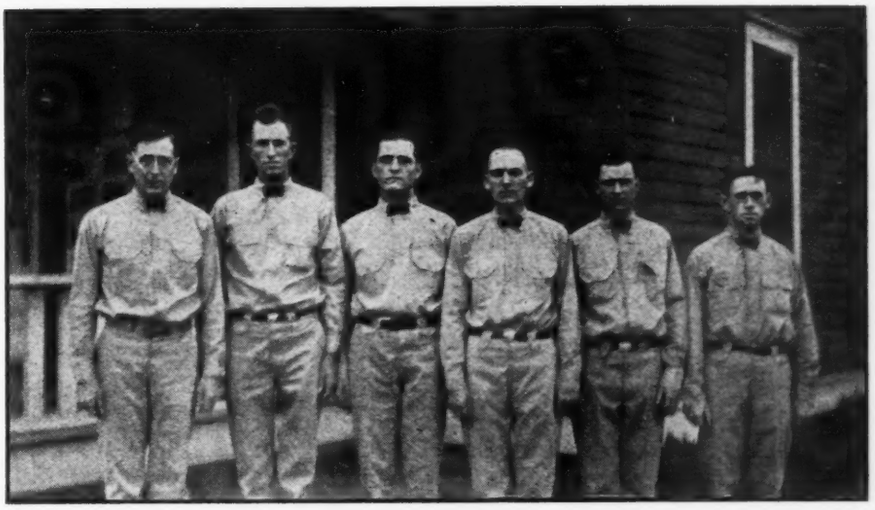
Edgar Whitehead, Jr., of the Wentz Oil Corp., told the Tonkawa field operators that there are five companies operating seven gasoline plants in the field. In addition there are seven booster stations. Comar Gasoline Co. and McMan Oil Co. each have two gasoline plants, while the Gypsy Oil Co., Amerada Petroleum Corp. and the Wentz Oil Corp. each have one plant. There are in all 57 units in the seven plants.

Present gasoline production of the Tonkawa field is 150,000 gallons of natural gasoline per day. Gas capacity of the plants is 70,000,000 cubic feet and the investment in plants is nearly $3,000,000. There are 150 men employed.

Maintenance and Repairs

Elmer Haines, of the Comar Gasoline Co., led a discussion of maintenance and repairs on gasoline plants. He stressed the point that a friendly spirit of co-operation among operators is necessary if plants are to be kept up to standard. When ill feeling exists between men, Mr. Haines said that they will slight inspection and repairs on their tour hoping that the other fellow will do the work on the next shift.

C. H. McBurney, master car builder for the Transcontinental Oil Co., attended all three meetings of operators to describe the best methods of keeping tank cars in continuous service and cutting down shipping losses. When he first went with the Transcontinental Mr. McBurney said that the company was continually bothered with shipping losses. Cars arrived at destination with excessive outage and now and then inspectors of the Bureau of Explosives cut out cars in transit and had the gasoline pumped into another car to finish the trip.



Comar Gasoline Co.'s safety first team at Tonkawa. Reading from left to right: F. R. Chase, captain, W. F. Burcham, T. A. Stone, C. H. Mondy, A. H. Clinkscales and E. H. Ross.

Out of 1277 cars operated by Transcontinental during the past six months there have been only two reports of leaky valves as a result of the company's present system. This record is the result of continuous and rigid inspections.

At first it was thought that periodical inspections would eliminate leaks but they still continued to be reported when cars were en route. It was then decided that every car should be thoroughly inspected before being loaded. At Transcontinental plants no car can be loaded unless it bears an O. K. from the car inspectors.

Before loading one man enters the car through the dome with gas mask while another stays on the outside to see that the air inlet of the mask is not obstructed. The man on the inside of the car brushes down scale from the interior walls, inspects bottom outlet valve seats and grinds the valves and seats if necessary.

Gasoline loosens mill scale in the interior of cars, according to the experience of Mr. McBurney. When scale falls into the bottom outlet valve and the valve is closed as tightly as possible there may be some leak still. If not a leak the grinding of the scale into the valve will cut the seat so that it will develop a leak later. When the practice of brushing down scale was first begun the inspection men sometimes obtained as much as two buckets of scale from the interior of a single car.

Safety valves on Transcontinental cars are tested every ten months on Class IV cars and every twenty-two months on Class II and III cars instead of every twelve and twenty-four months as required. This practice avoids trouble with the Bureau of Explosives when cars nearly due for testing are out on the road for a long trip. In returning safety valves to cars after testing, cup grease is used to seal threads rather than white lead as a more efficient seal. Composition gaskets are used on dome covers rather than asbestos rope which is likely to drop into the car and cause trouble.

First Aid Demonstration

The first aid team of the Comar Gasoline Co. demonstrated the treatment of two accident victims at the Tonkawa meeting, following an address on safety by Ray Miller, director of the Petroleum Safety Council of the Mid-Continent Oil & Gas Association. A victim of burns was given artificial respiration and a man with a cut artery in his wrist and a broken back was given emergency dressings and put in splints by the team which was composed of F. R. Chase, W. F. Burcham, T. A. Stone, C. H. Mondy, A. H. Clinkscales and E. H. Ross.

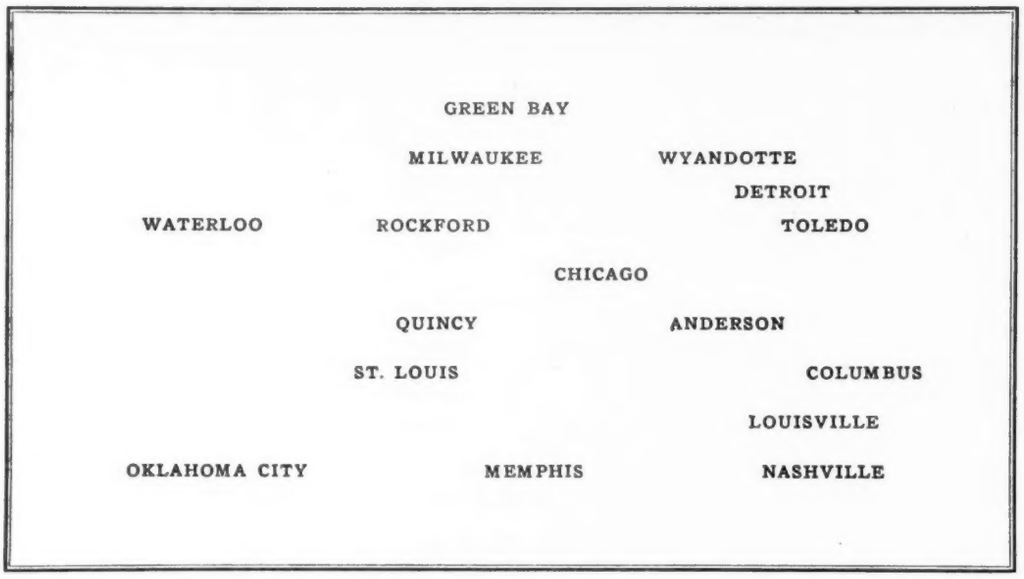
In his talk on safety Mr. Miller reported that in the Mid-Continent oil fields out of 25,000 men employed, accident reports for three months showed 800 injured seriously enough to lose some time from their work. Time lost as a result of the accidents totaled 67,000 days or nearly three days per man for the entire group of 25,000.

(Continued on page 39)

Records Show—

NAPTHA DISTRIBUTION
Increases
GASOLINE and LUB OIL SALES

THE Chart shows our present distribution points. We are now increasing this number. "APCO" Products are Nationally Advertised to the Paint and Varnish Trade and the Cleaning Trade and have been in use a number of years.



"APCO" Products are Dependable

MANY GOOD CITIES ARE OPEN—EXCLUSIVE RIGHTS TO JOBBERS

Shipments in four, six and eight thousand capacity cars

Wire or Write

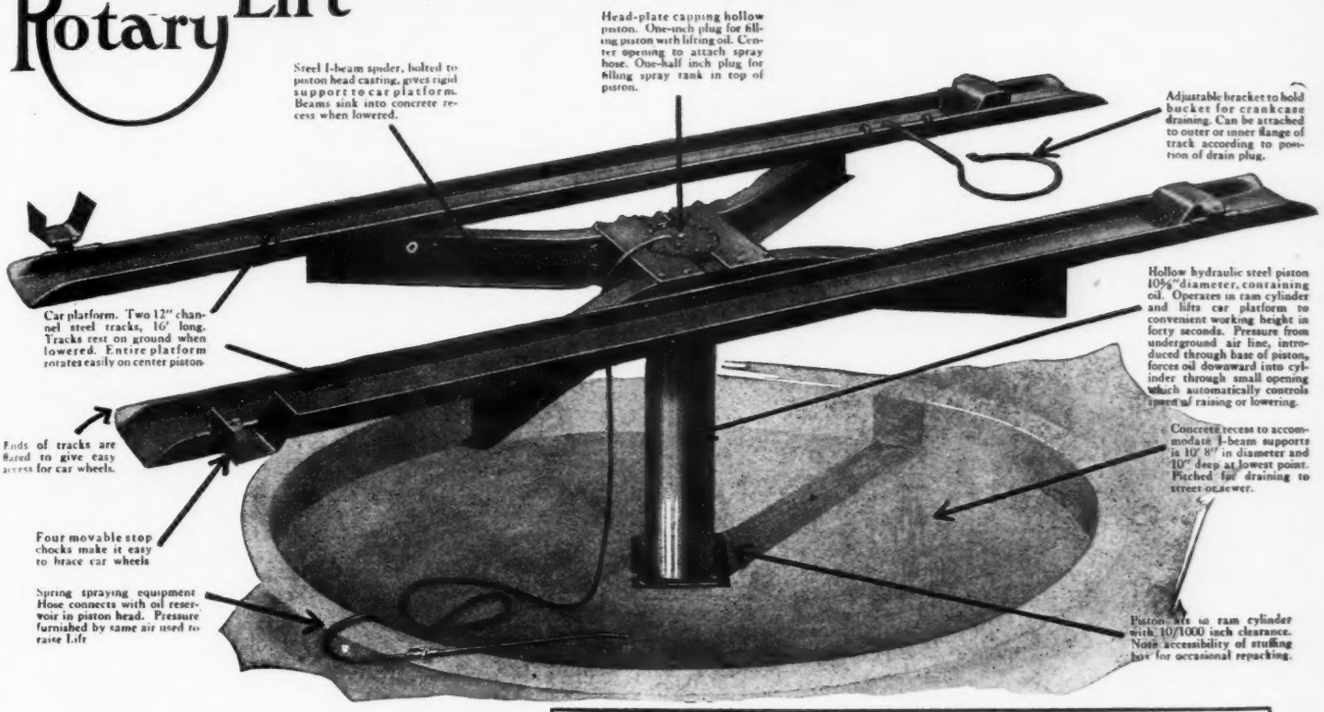
Yes, we are going to the Louisville Convention, Brown Hotel

ANDERSON-PRICHARD OIL CORPORATION

Refiners of "APCO" Napthas

Oklahoma City, Oklahoma

Rotary Lift


Head-plate capping hollow piston. One-inch plug for filling piston with lifting oil. Center opening to attach spray hose. One-half inch plug for filling spray tank in top of piston.
Steel I-beam spider, bolted to piston head casting, gives rigid support to car platform. Beams sink into concrete recess when lowered.
Adjustable bracket to hold bucket for crankcase draining. Can be attached to outer or inner flange of track according to position of drain plug.
Car platform. Two 12" channel steel tracks, 16' long. Tracks rest on ground when lowered. Entire platform rotates easily on center piston.
Hollow hydraulic steel piston 10⅝" diameter, containing oil. Operates in ram cylinder and lifts car platform to convenient working height in forty seconds. Pressure from underground air line, introduced through base of piston, forces oil downward into cylinder through small opening which automatically controls speed of raising or lowering.
Ends of tracks are flared to give easy access for car wheels.
Concrete recess to accommodate I-beam supports is 10' 8" in diameter and 10" deep at lowest point. Pitched for draining to street catchbasin.
Four movable stop chocks make it easy to brace car wheels
Spring spraying equipment. Hose connects with oil reservoir in piston head. Pressure furnished by same air used to raise Lift
Piston fits to ram cylinder with 10/1000 inch clearance. Note accessibility of stuffing box for occasional repacking.

. . . works like a charm

. . . women like it

. . . 270 cars first month

. . . one month's revenue —$654.19

. . . small investment

. . . low operating cost

. . . recommend it to dealers

Blue prints and prices upon application.

Automobile Rotary Lift Co.
Memphis, Tenn.

Indian Refining Company
INCORPORATED
REFINERS & DISTRIBUTORS OF PETROLEUM PRODUCTS
LAWRENCEVILLE ILLINOIS

September 21, 1925.

The Rotary Lift Company,
Memphis, Tenn.

Gentlemen:

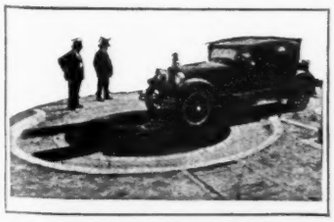
I have observed closely the operating results of our Motor-n-All Stations where we used the Rotary Lift in connection with complete automobile lubrication since sometime last May. During this time we have experienced absolutely no mechanical difficulty with the device. It works like a charm. It permits a cleaner and more thorough job, in shorter time than the unsightly grease rack in common use. Women are not afraid to drive on to it. It causes widespread word of mouth advertising because of its spectacular and dramatic characteristics.

With one good man and a helper we serviced during the first month's operation of our initial station two hundred seventy cars from which a revenue of $654.19 was derived. It is easy to figure that with the comparatively small necessary investment and the low added operating cost a nice volume of profit was added to our usual profit of operating the filling station itself.

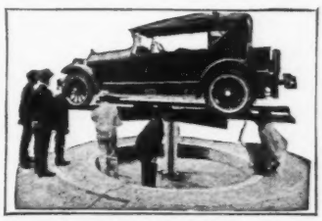
We are so well satisfied with the operation of the Lift and with the merchandising possibilities which surround it that we are making a number of additional installations at various points in our territory and are recommending its use to Havoline dealers in connection with Motor-n-All System of complete lubrication.

A. H. Wolfe

ASST. SALES MANAGER.

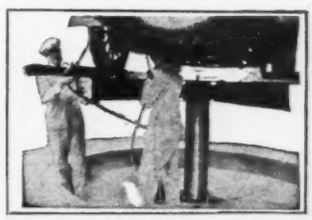


LOADS AT GROUND LEVEL



LIFTS CAR QUICKLY

ROTATES ANY ANGLE



GIVES AMPLE HEAD-ROOM

Crude Production by Districts

Daily average gross crude output of United States, by fields, for week ending with dates given below, as compiled by American Petroleum Institute.

OKLAHOMA

	Nov. 7	Oct. 31
North Braman	1,900	2,000
South Braman	8,000	8,700
Blackwell	2,750	2,750
Hubbard	2,200	2,300
Thomas	16,350	16,650
Tonkawa	45,400	43,650
Garber	53,250	43,050
Burbank	48,950	49,700
Osage, outside Burbank	33,250	33,300
Watchorn	5,000	5,450
Cushing	22,800	22,800
Yale Jennings	10,700	10,650
Davenport	18,550	18,000
Bristow-Slick	31,150	31,200
North Okmulgee	18,250	18,450
Lyons-Deaner	4,550	4,500
Stroud	3,500	3,800
Cromwell	24,200	24,750
Papoose	12,800	13,150
Wewoka	9,000	9,400
Duncan district	8,050	8,050
Graham	9,150	9,150
Fox	4,150	4,150
Healdton	15,250	15,300
Hewitt	14,150	14,150
Others	58,900	59,650
Total Oklahoma	482,200	474,700
Increase		7,500

* * *

KANSAS

Florence-Covert	2,000	1,950
Peabody Elbing	4,950	5,000
Eldorado-Towanda	14,600	14,550
Augusta-Fox Bush	5,500	5,500
Rainbow Bend	9,350	9,150
Russell	5,400	5,200
Others	66,800	67,450
Total Kansas	108,600	108,800
Decrease		200

NORTH LOUISIANA

	Nov. 7	Oct. 31
Homer	6,200	6,200
Haynesville	12,100	12,150
Caddo, light	8,800	8,800
Caddo, heavy	2,350	2,600
De Soto, Red River	4,000	4,050
Elm Grove	700	650
Bellevue	2,900	2,750
Cotton Valley	9,650	10,500
Total N. Louisiana	46,700	47,700
Decrease		1,000

* * *

ARKANSAS

El Dorado	8,750	8,450
Smackover, light	22,600	23,000
Smackover, heavy	166,800	174,750
Stephens	1,750	1,800
Nevada	1,350	1,400
Toal Arkansas	201,250	209,400
Decrease		8,150

* * *

CALIFORNIA

Santa Fe Springs	54,500	54,500
Long Beach	107,000	107,000
Huntington Beach	45,800	45,000
Torrance	34,000	34,000
Dominguez	27,500	28,000
Rosecrans	24,500	25,500
Inglewood	75,500	76,500
Midway-Sunset	100,500	100,500
Others	180,000	180,000
Total California	648,500	651,000
Decrease		2,500

* * *

NORTH TEXAS

Burkburnett	12,500	12,550
Electra	13,350	13,250
Iowa Park and K-M-A	4,050	4,100
Wilbarger	12,700	13,300
Panhandle	3,700	3,750
Petrolia	400	400
Archer county	31,200	31,600
Total North Texas	77,900	78,950
Decrease		1,050

* * *

EAST CENTRAL TEXAS

	Nov. 7	Oct. 31
Mexia	16,850	17,300
Currie	1,350	1,450
Richland	2,705	2,750
Corsicana-Powell	38,850	39,750
Wortham	15,950	16,850
Total E. C. Texas	75,750	78,100
Decrease		2,350

* * *

WEST CENTRAL TEXAS

Stephens county	13,850	13,400
Eastland county	6,950	6,900
Desdemona	2,250	2,350
Young county	7,300	7,050
Palo Pinto county	600	500
Callahan county	3,300	3,050
Shackelford county	2,550	2,850
Reagan county	30,600	29,900
Others	5,450	5,100
Total W. C. Texas	72,850	71,100
Increase		1,750

* * *

SOUTHWEST TEXAS

Luling	22,200	22,450
Mirando	6,700	6,700
Somerset	2,150	2,300
Lytton Springs	9,650	9,850
Others	950	900
Total S'west Texas	41,650	42,200
Decrease		550

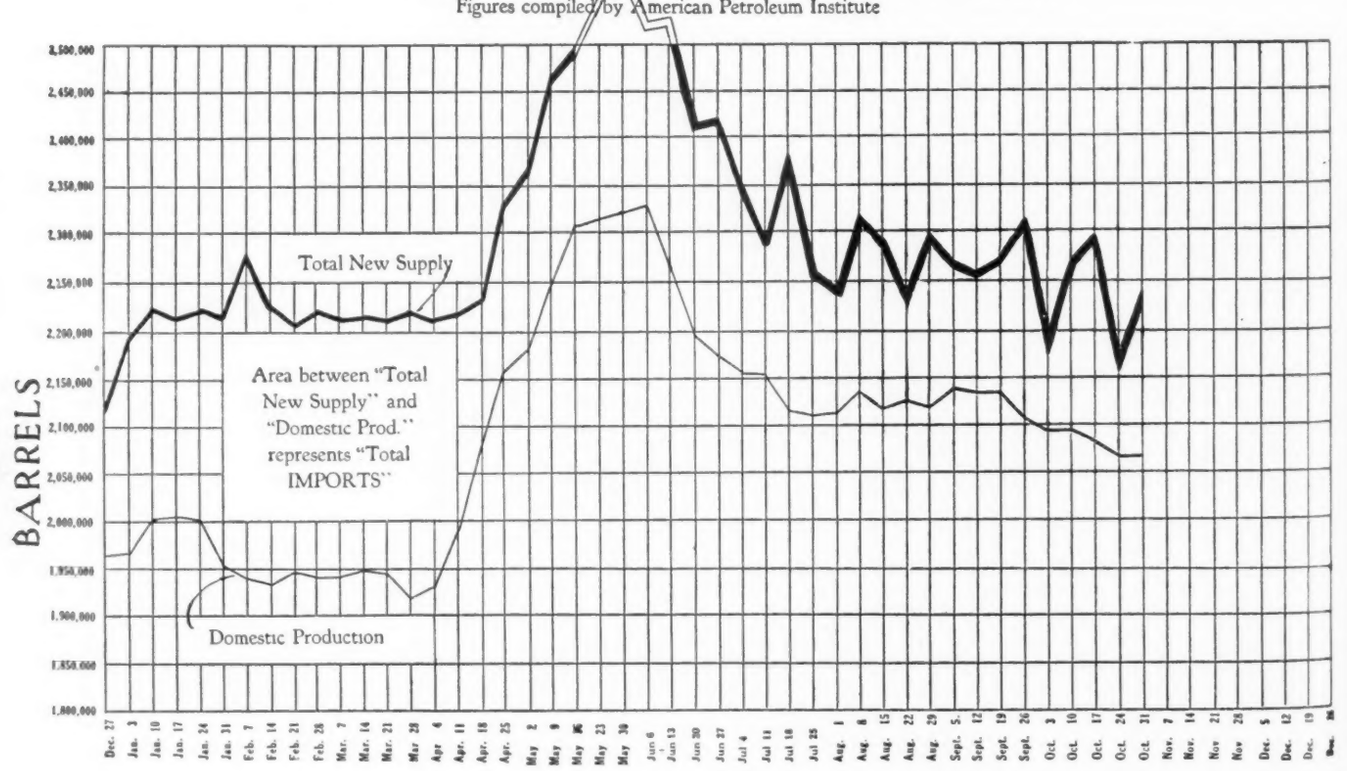
* * *

GULF COAST

Goose Creek	11,900	13,650
Hull	14,350	14,600
Saratoga	1,200	1,250
Blue Ridge	400	450
Damon Mound	1,150	1,150
Batson	1,550	2,800
West Colombia	9,750	9,750
Humble	4,700	4,800
Pierce Junction	400	950
Sour Lake	3,750	3,800
Spindletop	1,150	1,100
Orange county	15,600	13,750
Edgerly	500	500

DAILY AVERAGE CRUDE OIL PRODUCTION AND IMPORTS

Figures compiled by American Petroleum Institute


BARRELS
Total New Supply
Area between "Total New Supply" and "Domestic Prod." represents "Total IMPORTS"
Domestic Production

This chart is based on official complete figures of A. P. I. and is a week later than the production estimates given in tabular form above.

Evangeline	850	750
Vinton	6,550	6,800
Lockport	4,250	4,500
South Liberty	10,750	11,350
Big Creek	950	1,000
Others	800	600
Total Gulf Coast	90,550	93,550
Decrease		3,000

* * *

ROCKY MOUNTAIN

Wyoming

	Nov. 7	Oct. 31
Salt Creek	61,650	62,700
Grass Creek	2,750	3,000
Elk Basin	700	800
Big Muddy	3,400	3,400
Lost Soldier	3,700	3,700
Rock River	3,250	3,250
Teapot Dome	1,550	1,350
Others	2,850	3,150
Total Wyoming	79,850	81,350
Decrease		1,500

* * *

Montana

Cat Creek	3,250	3,350
Sunburst	10,900	11,000
Total Montana	14,150	14,350
Decrease		200

* * *

Colorado

Moffat (Craig)	2,900	3,000
Fort Collins	950	1,000
Florence	275	300
Others	290	300
Total Colorado	4,415	4,600
Decrease		185

* * *

New Mexico

Artesia	4,000	4,100
Hogback	500	550
Rattlesnake	475	400
Total New Mexico	4,975	5,050
Decrease		75

* * *

Total Rocky Mountain	103,390	105,350
Decrease		1,960

* * *

EASTERN

	Nov. 7	Oct. 31
(Including Ill., Ind., Ky., Ohio, W. Va., Pa., and N. Y.)	102,500	103,000
Decrease		500

* * *

Production Summary

	Nov. 7	Oct. 31
Production east of Rockies	1,403,340	1,412,850
Decrease		9,510
Total Production in U. S.	2,051,840	2,063,850
Decrease		12,010

Beaty Says Texas Has Not Bought Phillips

CLEVELAND, Nov. 10.—The Texas Co. has not purchased the properties of the Phillips Petroleum Co., according to a telegram from Amos L. Beaty, president. It was reported in a New York financial newspaper that "well defined reports in important oil circles are to the effect that The Texas Co. has concluded negotiations for the purchase of the entire property and assets of the Phillips Petroleum Co. and the assumption of its funded debt."

Details of the supposed purchase which was to be through an exchange of four shares of Texas for five of Phillips were then given in the newspaper article. Rumors that The Texas Co. was negotiating for Phillips have been in circulation for several weeks but Mr. Beaty in his wire said it was not true that the purchase has been made.

Gasoline Plant Operators Discuss Problems

(Continued from page 35.)

A. F. Maxon, Sun Oil Co., led the discussion of temperature and liquid control operations at all three meetings. Attention to detail and study of recording and indicating instrument readings in conjunction with plant results was stressed.

"For every process there is one best condition, the slogan of one of the instrument manufacturers, might well be adopted as the plant operator's slogan," Mr. Maxon said. "When your company built the plant it placed instruments at various places to show you what operating conditions are. If you watch these instruments and compare records with plant performance you will see very readily that temperature and liquid control are important.

Control Important

"In a 5000-gallon gasoline plant the absence of oil from the absorber for as short a time as 15 minutes per day would cut production of the plant sufficiently to cause a loss in revenue of $150 per month, the salary of one man."

Robert M. Moore, sales engineer for the Paige & Jones Chemical Co., explained the mechanism and operation of Zeolite water softeners at gasoline plants. Zeolite softeners have been adapted to the gasoline industry within the past year on account of plant water troubles.

O. W. Prescott, of the Magneto Ignition Co., Drumright, spoke on the care of magnetos at all three meetings. He had with him a K. W. magneto torn down to show all its parts. With these before him he was able to point out the bad results of too much or too little oil and to tell the operators what can go wrong with the ignition. He suggested that one man at each plant be responsible for oiling magnetos at specified times and that no one else be allowed to perform that duty, pointing out that a $35 bill for repairs might easily be caused by lack of oil for 30 minutes and a rewinding job be made necessary by too much oil shorting coils.

At the Garber meeting Claude Johnson and Fred Corwin, lubricating engineers for the Marland Refining Co., gave an illustrated lecture on refining of oils and lubrication problems in the operation of internal combustion engines.

O. H. Schoenwald, superintendent of the gasoline department of the Wentz Oil Corp., acted as chairman of the Tonkawa and Burbank meetings. R. R. Owens, Marland Refining Co., was chairman at Garber.

The next meeting will be held at Drumright on Nov. 17, followed by meetings at Depew on the 18th and Sapulpa on the 19th. An entirely new program is being arranged for the next series.

Special to Louisville From New England

CHICAGO, Nov. 7.—There will be two or three Pullman cars loaded with New England jobbers, down at the convention of the National Petroleum Marketers' Association in Louisville on Nov. 17, 18 and 19. That is the guess of Ray Shaw, publicity and sales promotion department of the N. P. M. A., judging from the reservations at the hotels and the news that the railroads have offered the New England jobbers special service.

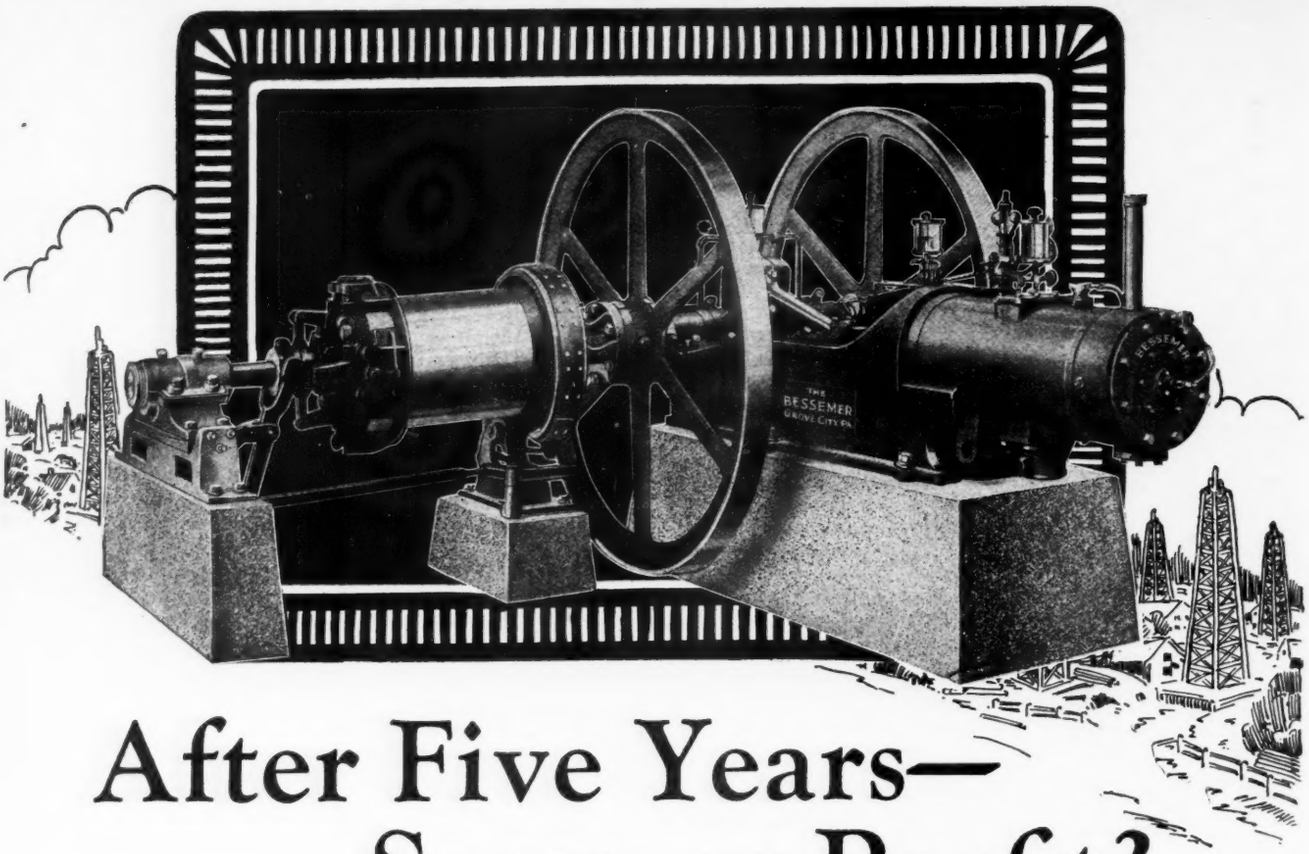
A letter received at the N. P. M. A. offices yesterday from Fred Bergfors, head of the Quincy Oil Co., Quincy Adams, Mass., related that the New England jobbers recently held a meeting and learned that the delegation from the East to Louisville was going to be large. It was following this meeting that the railroad authorities offered them, through their association, one, two or three Pullmans—whatever they needed to carry their special crowd.

Garber Pool Wells Making Water

TULSA, Nov. 9.—Two wells on the famous Schroeder lease of the Roxana Petroleum Corporation at Garber have started making considerable quantities of water and a third has begun to show a trace of water. The company's No. 1-W, in the southwest corner of the lease, a northeast offset to the Sinclair discovery well made 5500 barrels of oil and 300 barrels of water on Nov. 8, which is the first gauge since the water appeared. On the preceding day the well made 6,100 barrels of oil with no water.

No. 3-W, a location to the east, which has been producing only a week or two, fell off a thousand barrels in the past 24 hours, due to water encroachment, having made 7,000 barrels of oil Saturday and 6,000 Sunday with 600 barrels of water. In this well the flow of water was apparently prevented from increasing by pinching in the gate valve and the company has now installed a California type "bean" in the flow line which may succeed in controlling the flow of water.

The company's No. 2-W, a location north of No. 1, the well that has been making between 9000 and 10,000 barrels daily for more than 60 days, also is reported to be showing a trace of water this morning. It is probable that production from all these wells will now begin to fall rapidly and this will be an important factor in the future status of the Garber field.



After Five Years— Scrap or Profit?

WHEN you buy an oil field engine do you make a safe, long-time investment or do you just buy an engine?

Almost any engine will run fairly satisfactorily for two, three or four years (some more, some less) but it's the service *after* that time that determines the soundness of your oil field engine investment.

Bessemer engines invariably outlast and outwork any other engine. Long after their first cost has been wiped off the books, Bessemers are still at work, paying *extra* dividends for fifteen, twenty and twenty-five years or more.

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BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Garber May Hit Peak of 100,000 Barrels If Wells Hold Up, But Will They?

By A. F. Hinton
N. P. N. Staff Writer

TULSA, Nov. 7

RECENT developments at Garber have indicated that the field may extend for an indefinite distance to the north and northeast, and it is not impossible that most of the deep sand development up to this time will take on the appearance of having been a preliminary effort in the search for the field's real big pay. Wells recently drilled in more than a half mile north of the original Wilcox sand discovery are showing considerably higher structurally than the first well and larger production is being developed than anywhere in the immediate vicinity of the discovery well.

Predictions that the field's output will reach 100,000 barrels within a short time are freely made by geologists and production men, while some can be found who are willing to hazard the opinion that the peak will be nearer 200,000 barrels than the figure given. These predictions, of course, are predicated on the assumption that all the great wells now flowing will continue to hold up as remarkably as they have in the past, and that is an assumption that may be proved unwarranted at any moment.

There seems little reason to doubt that big production is going to be found north of wells now producing, and there is no way of telling at this time how big this production will be nor how far it will extend. If wells now producing can hold up until wells in these areas start coming in, then the field will go very high in production beyond a reasonable doubt. However, it is well to remember that some of the biggest wells have been producing for 60 days and are due for a rapid decline at almost any moment, while water encroachment is an ever-present menace even to those wells which so far have not been so troubled.

Recent reports to the effect that crude coming from some of these big wells is showing a higher temperature may be taken as as indication that water encroachment is a matter of only a short time, and it is likely that when it comes, it will result in a very sudden and drastic falling off in production. At any rate, it doesn't seem possible that these wells can hold up their big production much longer without something happening, for it just isn't done that way.

The Roxana Petroleum Corp. is still leading the league with its Garber output, having four wells flowing better than 30,000 barrels daily, and with five more just about ready to come in and all on proven territory with possibly one exception. This company's Schroeder lease is one of the busiest spots in any oil field and is a most interesting place to visit, if the visitor can find a place from which to watch without at the same time being in the way. Everything connected with the production, handling and transportation of oil can be seen on this lease, in various stages of completion. An army of men is engaged in a multitude of jobs, with elbow room at a premium.

The company has been having a very difficult time handling the production of its big wells, having strained its pipe line and storage facilities to the limit, but has managed to keep a jump or two ahead of production. When we were there last week they were able to pump about 32,000 barrels out daily, so they could keep the oil moving as long as everything went along in good shape. With new wells due, however, it is likely that the company's output from this lease will be greatly increased, and additional efforts will have to be made to dispose of the crude. It is reported that the Champlin Refining Co. will connect into the lease and will take about 18,000 barrels daily. It is also rumored that the Roxana has sold 250,000 barrels to Marland, to be delivered in daily runs, and has made other sales of lesser amounts. It is also reported to have leased about 250,000 barrels of steel storage from Champlin and from the Enid Pipe Line Co.

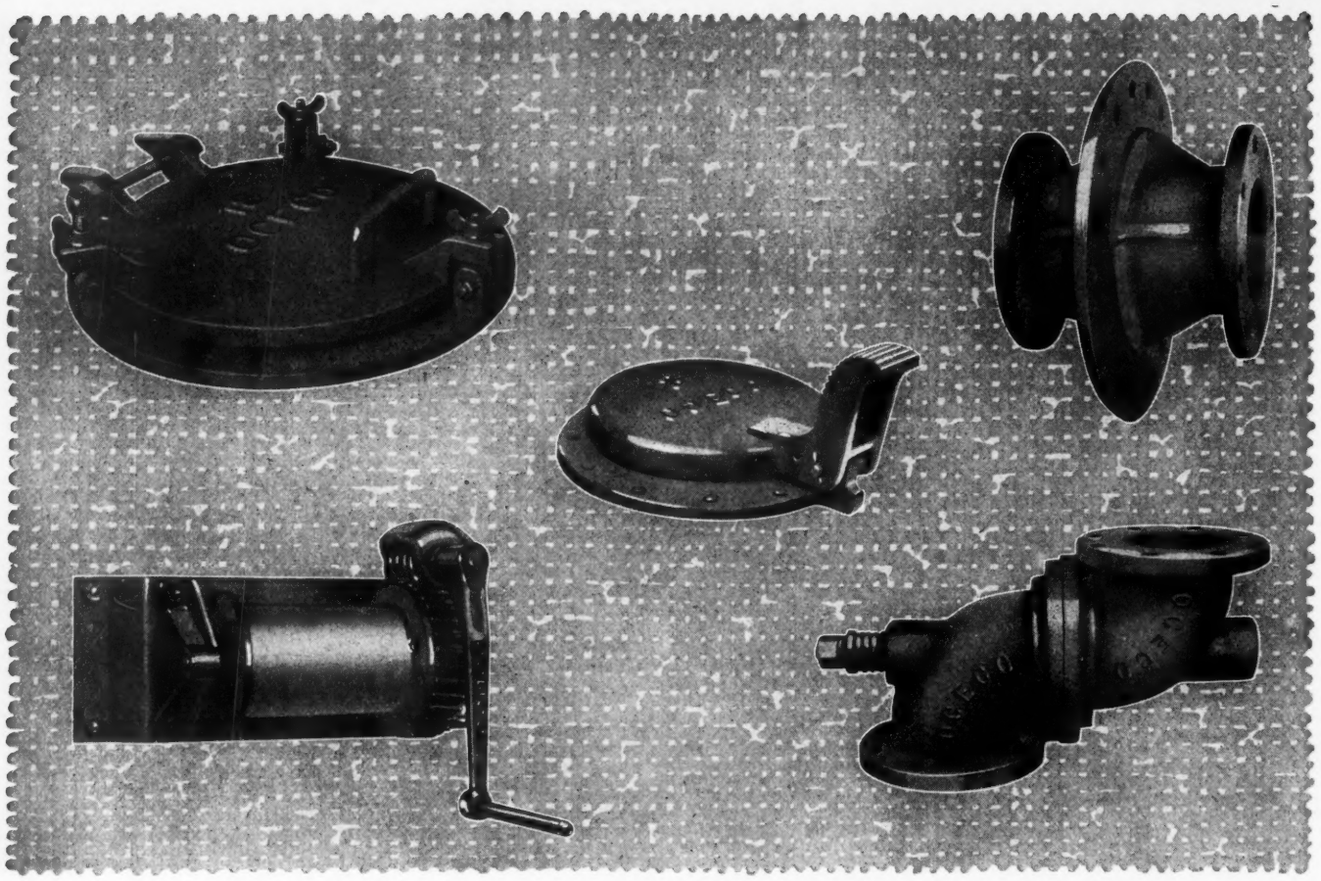
With its present production at Garber, the Roxana must have a total net daily output of something like 60,000 barrels at present, putting it in the very first rank of oil producing companies of the country. The figure given refers only to the company's Mid-Continent production and does not take into consideration its output in Texas, Louisiana or Arkansas. It owns a half-interest in the Comar Oil Co., which produces about 32,000 barrels daily and also owns the Wolverine Oil Co., with about 3500 barrels daily production.

The newest well at Garber is Mid-Continent-Marland No. 54 School Land, in the NEc SE of 13-22-4W, a west offset to the Roxana's No. 5-W Schroeder, which is making better than 9000 barrels daily. The new well topped the sand at 4244 feet, and is about 30 feet higher stratigraphically than any other wells in the field. At the depth given the well filled up about 1000 feet with oil and as drilling progressed started flowing by heads. At last reports it was drilling ahead into the sand and is expected to make a big well. It will be the twenty-fifth deep sand producer in the field.

At last reports, the 24 deep wells at Garber were making 47,600 barrels daily, a decline of about 1000 barrels from the previous day's report. The Roxana's No. 3-W Schroeder, in the SEc SW SW of 18, was deepened to 4330 feet during the week and was making 340 barrels an hour, an increase of 600 barrels daily. The company's No. 1-W is producing 6100 barrels, and No. 5-W is flowing 9003 barrels. Its No. 4-W which lies between No. 2 and No. 5 and will complete a line of deep sand producers all along the west line of the 160-acre lease, is drilling out

Drilling Operations in Oklahoma, Kansas and N. Texas

	Nov. 7 — Week Ending — Oct. 1									
	Loc.	Rigs	Drg.	S.D.	Total	Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank		4	3	1	8	3	1	4	1	9
Other Osage	2	8	51	12	73	4	10	52	10	76
Bristow-Cushing	24	39	139	21	223	26	34	141	21	222
North Oklahoma	11	17	141	117	286	11	15	137	118	281
South Oklahoma	11	22	137	67	237	12	24	129	70	255
Muskogee		11	47	13	71	...	8	49	18	75
Okmulgee-Bristow	4	49	124	40	217	6	57	112	35	210
Tonkawa		1	11	2	14	...	3	12	9	24
Wewoka-Cromwell	7	12	96	15	130	9	15	93	18	135
Total Oklahoma	59	163	749	288	1259	71	167	729	300	1267
KANSAS	48	79	225	128	480	54	70	238	131	493
NORTH TEXAS										
Eastland County		4	52	9	65	...	2	45	4	41
Stephens County		17	31	19	67	...	20	30	18	68
Texas Panhandle		19	28	14	61	...	19	30	17	66
Me ia District		6	11	8	25	...	5	14	6	25
E. Texas Wildcats		7	6	22	35	...	5	6	24	35
W. Texas Wildcats		22	120	67	209	...	27	116	74	217
Wichita Falls		40	146	37	223	...	38	137	37	212
Total N. Texas		115	394	176	685	...	116	378	180	675
GRAND TOTAL	107	357	1368	592	2424	125	353	1345	611	2434



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No. 3 SAFETY TANK WINCH
One of the improved line of winches which meets all requirements for swing lines of various sizes, offering the utmost in convenience and safety.

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Gas-tight, water-tight, spark-proof and affords complete protection in every way.

STEEL TANK NOZZLE
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OIL TANK **OCECO** EQUIPMENT
SAVES EVAPORATION AND PREVENTS FIRE

Completions in Oklahoma and Kansas, Week Ended Nov. 7

OKLAHOMA

Carter County

Company	Well	Location	Depth	Initial Production
Magnolia	1	C SE NE SE 32-1-3W	T.D.3530	Dry
Sturm-Slick	1	NEc SE NE 31-2-1W	T.D.3351	Dry
Amerada	1	NWc SE SE 34-5-1E	T.D.1310	Dry

Comanche County

Company	Well	Location	Depth	Initial Production
Westheimer et al	1	NEc NE NW SE 30-2-9W	T.S.2040	13

Creek County

Company	Well	Location	Depth	Initial Production
Olean	5	NEc NW SW 32-17-8	3471–3493	240
Tibbens	1	SWc SE NE 34-15-8	1390–1400	2M
Atlantic	1	SEc NE SE NE 16-14-10	–3357	Dry
Wilcox	1	SEc SW SE 18-14-10	T.D.3475	Dry
Prairie	1	C SW SW NW 13-17-8E	T.D.3534	Dry

Garfield County—Garber

Company	Well	Location	Depth	Initial Production
Sinclair	5	CSL NE SW 36-22-4	2224–2248	55
Roxana	26	NWc SE NW SW 18-22-3	2317–2336	385
Sinclair	20	C SW NE 30-22-3	1957–1962	90

Hughes County—Holdenville

Company	Well	Location	Depth	Initial Production
Gypsy-Houston	2	C SE NW NE 35-8-8	3307–3309	2

Hughes County

Company	Well	Location	Depth	Initial Production
Phillips et al	1	C SW SW NW 17-8-10	T.D.2800	50M

Jefferson County

Company	Well	Location	Depth	Initial Production
Gypsy	1	SEc NE 33-6-5W	1460–1484 OWD	2100

Kay County

Company	Well	Location	Depth	Initial Production
Blackwell	3	SEc 9-27-1W	3430–3448 OWD	38M
Mealy et al	1	C NW NW NE 9-28-1W	T.D.2474	Dry

Kay County—Tonkawa

Company	Well	Location	Depth	Initial Production
McMan	5	C SW SE SE 27-25-1W	T.D.3455	Dry
Comar	3	C SE NE SW 35-25-1	T.D.1963	Dry
Slick	4	C NE SE SW 35-25-1W	T.D.3895	Dry

Kay County—Thomas

Company	Well	Location	Depth	Initial Production
Marland	1	SEc 16-25-2W	4129–4152	2276
Carter	2	C NW NW NE 21-25-2W	T.S.4414	175

Lincoln County—Davenport

Company	Well	Location	Depth	Initial Production
Texas	5	SEc SW SW 2-14-5	3306–3387	1100
Magnolia	5	SEc NW NE 3-14-5	3379–3415	660, 15M

Muskogee County

Company	Well	Location	Depth	Initial Production
Hutchinson	7	C SW SW 35-15-16E	T.D.1852	Dry
Buell-Bradley	2	SWc NW SW 32-15-19	T.D.2318	Dry

Noble County—Tonkawa

Company	Well	Location	Depth	Initial Production
Comar	3	C SW NW SW 2-24-1W	4162–4172	66
Comar	4	C NE NW SE 2-24-1W	T.D.4156	Dry
Comar	4	NWc NE NW NE 2-24-1	T.D.1370	Dry
Comar	15	CSL NE 2-24-1	T.D.4078	Dry
Comar	5	C SE SE NE 3-24-1	T.D.4325	Dry
Comar	17	NWc SE NW NE 3-24-1	T.D.4170	Dry
Comar	19	C NW SE 3-24-1	T.D.3463	Dry
Herron	1	NWc SW 9-24-1	T.D.4615	Dry
Champlin	1	NEc SW 21-24-1	T.D.2685 OWD	Dry

Noble County

Company	Well	Location	Depth	Initial Production
Mid-Con. Pet	4	NWc SW 14-23-2	T.D.2140	Dry

Okfuskee County

Company	Well	Location	Depth	Initial Production
W. Phillips	1	C SW SE NE 6-11-8	T.D.3745	Dry

Okmulgee County

Company	Well	Location	Depth	Initial Production
Okla. Natl	3	SEc NE SE SE 24-16-12E	2188–2210	30
Mickelson	2	SEc 19-15-12	1040–1063	2M
Pure	6-Kemp	CNL NW SE 25-13-11	2443–2473	35
Simms	5	NWc SW NW 31-12-12	3286–3306	60
Pulaski	2	SEc SE SW 36-12-13	2828–2857	300
Mid-Cont. Pet	13	NWc SW NE 12-13-13	2448–2472	100
Lebow	8	NEc SW 15-13-14	1922–1927	50
Devonian	3	SEc SW 7-15-13	2695–2702	600
Devonian	8	C SW SE 7-15-13	2665–2675	720
Anglo-Tex	6	CEL SE SW 29-15-11	T.D.2528	Dry
Kingwoos	1	SWc SE NE 4-13-12	T.D.3085	Dry
Wooster-Mee	4	SEc NE NW 31-12-12	–3387	Dry
Sommerville	3	NWc S½ SW NW 25-13-14	T.D.2149	Dry
Price	1	SWc NE NE 2-14-14	T.D.1459	Dry
Swindler	3	CNL NW SW 11-15-14	T.D.1560	Dry
Selby	4	SWc SE NW 21-15-14	T.D.2255	Dry
Hilde	4	CWL NW NW SE 35-15-14	T.D.1610	Dry

Osage County—Burbank

Company	Well	Location	Depth	Initial Production
Mid-Kans	9	SWc SE NW 26-27-5	2920–2958	160
P & R Comar	1	C SW SW SW 8-27-6	2930–2980	1536

Osage County

Company	Well	Location	Depth	Initial Production
Knupp-Phillips	1	SEc NW 3-26-11	1482–1504	20
Texas	4	CNL SE 29-25-8	2470–2494	40
Atlantic	1	SWc NW 31-23-8	3002–3009 OWD	5
Mid-Kans	3	CSL NW SE NW 11-21-10	2358–2400	50
Kewanee	5	SEc SW 19-21-12	2064–2069	60
I. T. I. O.	334	SWc NW NE SE 29-29-10	1755–1768	1M
Winona	1	C SW 21-29-11	1001–1018	10
Texas	1	NEc NW NE SE 21-26-8	–2659	Dry

Pawnee County

Company	Well	Location	Depth	Initial Production
Magnolia	1	NEc NE SW 8-22-5	T.D.4128	Dry
Magnolia	1	SWc SE SE 29-20-6	T.D.3550	Dry
Amerada	2	CSL SW SW SE	3752–3755	100
Gypsy-Selby	3	SWc SE SE 35-21-7	2735–2743 OWD	30
Magnolia	1	SEc NE SW 9-20-6	3105–3130	25
Magnolia	9	SWc SE NE 21-20-6	3063–3136	12
Murray et al	2	NEc 2-20-7	2738–2742 OWD	60

Payne County

Company	Well	Location	Depth	Initial Production
Wheeler et al	1	NEc SW 11-18-5	T.D.3619	Dry

Pittsburgh County

Company	Well	Location	Depth	Initial Production
Barker	1	SWc NW NW 8-2-16	T.D. 300	Dry

Seminole County—Cromwell

Company	Well	Location	Depth	Initial Production
Tidal Osage	3	C SW NW NE 5-10-8	3430–3464	12

Seminole County

Company	Well	Location	Depth	Initial Production
Superior	1	C NW NE NW 15-9-6	T.D.2630	Dry

Seminole County—Wewoka

Company	Well	Location	Depth	Initial Production
Magnolia	1	C SW SW SW 29-8-8	T.D.3330 OWD	Dry
Boggs-Sykes	6	C SW SE NE 31-8-8	T.D.3156	Dry

Stephens County

Company	Well	Location	Depth	Initial Production
Smith-Law	2	NWc SE NE 31-1-8W	T.D.2267 OWD	Dry
Smith-Law	3	CWL NE NE 31-1-8	T.D.2113 OWD	Dry
Shaner	1	SWc NE 12-1-5W	T.D.3011	Dry
Carter-Knox	2	NWc SE NW 2-2-5W	T.D.1260 OWD	10
Lorraine	8	CWL SW SE 32-1-8W	2206–2210	35

Tulsa County

Company	Well	Location	Depth	Initial Production
Riverland	6	SWc NE NE 34-19-11	2276–2290	50
Mutual	3	SWc NE SW 29-19-12	2120–2174	15
Wilkerson et al	1	NWc SW 34-19-11	T.D.2345	Dry

KANSAS

Butler County

Company	Well	Location	Depth	Initial Production
Skelly	1	NWc 13-25-3E	2662–2682	25
Rogers	2	CSL SW NW 29-26-8E	2700–2760	75
Empire	12	NEc NW NE NE 35-27-4E	2602–2609	50
Atlantic	1	SEc SW 15-28-7E	2604–2688	180
Sheldon et al	1	NEc 13-24-7E	T.D.2775	Dry
Gable Franks	1	NWc SE 10-25-5E	T.D.2640	Dry
Liggett et al	1	SWc 24-25-7	T.D.3090	Dry

Chase County

Company	Well	Location	Depth	Initial Production
Ark. Fuel	1	C NE NE 19-21-8	T.D.2602	Dry
White-Huff	4	SEc 35-22-9	2508–2518	75

Chautauqua County

Company	Well	Location	Depth	Initial Production
Southwestern	5	NEc 16-32-12	1120–1132	1M
Orlando	1	NEc SW SW 16-33-9	T.D.2636	Dry

Cowley County

Company	Well	Location	Depth	Initial Production
Trees	3	SWc NE SE 10-31-3	3058–3074	50

Cowley County—Rainbow Bend

Company	Well	Location	Depth	Initial Production
W. Phillips-Marland	5	SWc 16-33-3E	3188–3218	385
W. Phillips-Marland	12	NWc SW NW 21-33-3	3197–3236	450
W. Phillips-Marland	4	SWc NE SW 21-33-3	3240–3271	250

Elk County

Company	Well	Location	Depth	Initial Production
Theta	1	NWc 23-31-10	1300–1336	50
Theta	1	C NE SW 35-29-12	T.D.1749	Dry
Pennock	1	NEc SE SE 25-30-10	T.D.1200	Dry

Greenwood County

Company	Well	Location	Depth	Initial Production
Theta	4	NWc SW SE 8-22-10	2284–2368	200
Empire	3	SEc SW SE 24-23-8	2573–2609	150
Sheedy et al	1	SWc NW 11-23-9	2315–2358	200
Phillips	3	SWc NE 20-23-9	2517–2553	30
Mission	1	NEc 16-23-10	2148–2156	5
Mid-Kans	2	NWc SE SE NE 19-25-9	2325–2385	250

Lyons County

Company	Well	Location	Depth	Initial Production
Tolbot	1	NWc NE 25-21-10E	2585–2586	300
Phillips	1	NWc SW 33-21-12	1895–1912	150
Ritchey Moore	1	NWc SW NW 31-20-11	T.D.2610	Dry

Marion County

Company	Well	Location	Depth	Initial Production
Natl. Refg	13	CNL N½ SE 17-21-4E	2407–2427	100
Sheedy et al	2	NEc NW NE 24-21-4	2390–2394	150

Russell County

Company	Well	Location	Depth	Initial Production
Muddy	3	NEc SW NW 5-12-15W	2769–2771	288
Valerius	5	SEc SW SW 5-12-15	2821–2828	200
Johnson	3	SEc NW 5-12-15	2771–2778	288
Carter	1	SWc NE 5-12-15W	2792–2797	190
Streeter-Stearns	6	SWc NW SW 8-12-15	2919–3016	190
Muddy	2	SWc NW 5-12-15	T.D.2851	Dry
Derby et al	8	NWc SW 5-12-15	T.D.2854	Dry

Sedgewick County

Company	Well	Location	Depth	Initial Production
W. Phillips	1	SWc NE 32-29-2W	T.D.2120	Dry

Wilson County

Company	Well	Location	Depth	Initial Production
Wiser	1	NEc SE 12-28-13W	1421–1422	3M

the cement plug after standardizing at 3701 feet and probably will be the next well in on the lease.

Thomas Developments

Latest well in the Thomas field is Marland Oil Co. No. 3 Thomas, in the NEc SW SW of 15-25-2W, a location due north of the Wilcox sand discovery well. This well topped the sand at 3952 feet, or three feet higher than the discovery, as reported last week, and at total depth of 4005 feet made 2901 barrels the first 24 hours. It is being drilled somewhat deeper, and was flowing 150 barrels an hour at last reports.

First report of a showing of water in the discovery well was a feature of Thomas developments this week, the No. 2 Thomas having made 1760 barrels of oil and 20 barrels of water during the past 24 hours. This is a considerable decline in production, and may mark the beginning of the end for this famous well. Marland Oil Co. has made location for two wells to be drilled to the 2000 foot sand in this field, one on its School Land No. 24 lease, a west offset to No. 4 Thomas, and one on the Thomas lease, in the NWc SW SW of 15. Marland's production at Thomas now is 14,178 barrels, of which

Completions in North Louisiana and Arkansas, Week Ended Nov. 5

LOUISIANA

Caddo Parish—Greenwood Dist.

Company	Well	Location	Depth		Yield
Glassell & Meyers	Florsheim No. 2	9–17–16	2590	15m.	Gas

Webster Parish—Hortman Dist.

Fortuna Oil Co.	R. R. Cox No. 4	15–21–15	2559	150	Oil, 20 s.w.

Bossier Parish—Princeton Dist.

La. Oil Refg. Co.	Fee D-20	15–19–11	374		12
Simms Oil Co.	Webster No. 1	9–18–11	2814		Dry

Winn Parish—Sikes Dist.

Ohio Oil Co.	Rowland No. 1	5–12–1W	4046		Dry

La Salle Parish—Little Creek Dist.

Bowling & McCurry	Holmes No. 1	20–9–1E	1100		Dry

ARKANSAS

Smackover

Company	Well	Location	Depth		Yield
Harrell et al.	Berg No. 2	32–15–15	2394		110
Southern Oil Purch. Co.	Watts No. 1	26–15–15	2699		Dry
Eason et al.	Murphy No. 5	15–16–15	2482		125
Magnolia Petroleum Co.	Hatfield No. 7	7–16–15	2390		120
Mazda Oil Co.	Lawton R-5	10–16–15	2688	30m.	Gas
Smitherman & McDonald	Duman No. 1	23–16–16	2074		15
Sun Company	Hays No. 19	3–16–15	2661	30m.	Gas
Sure Oil Company	McClanahan No. 5	6–16–15	2548		250
The Texas Company	Graves No. 7	3–16–15	2584	25m.	Gas
Thurman	Wingfield No. 4	5–16–15	2545	20m.	Gas
Woodley Petro. Co.	Umsted No. 8	4–16–15	2510	15m.	Gas

Stephens

Buffalo Oil Co.	Culp No. 1	25–15–19	1544	15m.	Gas
Humble Oil Refg. Co.	Tribble No. 1	20–14–19	1401		Dry

Completions in North and Central Texas, Week Ended Nov. 7

Archer County

Company	Well Farm	Location-Sur.	Depth	Initial Prod.
Empire	12-Wilson	ATNC 23	1582–1590	10
Pace-Hoosier	1-Miller	ATNC 21	902–906	50
W. Phillips	4-Wilson	Howard	1717–1718	150
Sibley et al	11-Wilmot	SP 4	900–908	60
Wichtex-Dixie	2-Jackson	Aldridge	1560–1562	16
Barkley-Meadows	14-Wilson	ATNC 88	1515–1524	60
Lomax et al.	7-Wilson	ATNC 88	1512–1523	100
Wilson	3-Wilson	ATNC 85	1512–1515	50
Perkins et al.	6-Anderson	SAR 22	1414–1424	125
Trio	3-Brown	TEL 1582	1373–1398	100
Marland	2-Ickert	Crawford Pa. 17	1193–1207	25
Madden-Wolf	6-Boren	Newman	1075–1084	125
Madden-Wolf	7-Boren	Newman	1076–1088	100
Tidal	1-Taylor	ATNC 14	T.D.1800	Dry
Texhoma-Grisham	1-Wilson	Geraldine	T.D.1590	Dry
Hanover	1-Ray	Carson	T.D.1505	Dry
Moores et al.	11-Ickert	Crawford 17	T.D.1402	Dry
Bridwell-Mayfield	4-Boren	Newman	T.D.1107	Dry
Clark et al.	2-Boren	Newman	T.D.1088	Dry

Brown County

Simms	2-Gaines	Miller	1474–1487	75

Callahan County

Cranfill-Reynolds	1-Cent.	Anderson	T.D.1442	30
Moore	1-White	Comal	1492-T.D.	Dry

Eastland County

Root et al.	1-Pelfry	H&TC 61	T.D.3145	5M

Erath County

Goodwin	4-Laney	Bradley	2601–2621	½M

Freestone County

Peacock et al.	1-Spencer	Wortham	T.D.2971	30

Kaufman County

Pure-Gulf	1-Daird	Ables	T.D.3295	Dry

Limestone County

Eisenmayer et al.	1-Baker	Abbott	T.D.1550	Dry

Montague County

Texhoma	2-Maddox	Thompson	T.D. 867	110

Navarro County

Humble	30-Davis	Barry	T.D.1630	23
Gulf	5-Bounds	Hillhouse	3200–3207	888
Garland Kent	2-Derdon	O'Donnell	T.D.1250	Dry

Palo Pinto County

Company	Well Farm	Location-Sur.	Depth	Initial Prod.
Upham	2-Chestnut	Green	3990–4000	½M
Moore-Sneebold	1-Slemmons	TP 44	–3309	Dry
Hart	10-Hart	TP 26	T.D.3256	Dry

Parker County

Swensondale	1-Evans	TP 349	T.D.4780	Dry

Shackleford County

Phillips	8-Parrish	BAL 47	2104–2115	5

Stephens County

Humble	2-Sweeney	TP 1	3228–3294	75
Humble	3-Sweeney	TP 1	3227–3302	105
Mid-Kans.	17-Hill	Talley	3180–3200	100
States	1-Hawkins	TP 76	2003-T.D.	Dry
Raney et al.	1-Hamlin	TP 1	T.D.3465	Dry

Wichita County

Texhoma	6-Waggoner	BS&F 11	1763–1765	12

Wilbarger County

Humble	35-Stephens	H&TC 83	2346–2370	38
Landreth	2-Waggoner	H&TC 42	1871–1874	100
Landreth	1-Waggoner	H&TC 43	1897–1907	100
Roxana	1-Waggoner	H&TC 43	1919–1926	120
Giles et al.	1-Baker	H&TC 74	T.D.2465	Dry
Shipley	1-Murphy	H&TC 1	T.D.2684	Dry
Gulf	2-Waggoner	H&TC 65	T.D.2502	Dry
Gulf	3-Waggoner	H&TC 50	T.D.2506	Dry
H O & R	2-Waggoner	H&TC 50	T.D.2598	Dry
Hutchinson-Fain	2-Waggoner	H&TC 50	T.D.1851	Dry
Skelly-Gray	1-Waggoner	H&TC 9	T.D.2406	Dry
Smith	1-Waggoner	H&TC 24	T.D.2435	Dry

Young County

Roeser-Pendleton	2-Cathey	TEL 68	1188–1202	15
Lesh-Lehman	11-Kemp	TEL 401	1083–1087	15
Tex-Unity	16-Hausler	Poitevent	T.D.1120	Dry
Wilson et al.	1-Wright	Olney	T.D.1069	Dry
Christie	1-Keathley	TEL 153	T.D.1065	Dry
Swastika	1-Thomas	TEL 155	T.D.1057	Dry
Knight-Hines	1-Rothwell	TEL 217	T.D.1100	Dry
Tex-Unity	1-Rogers	TEL 232	T.D.1107	Dry

8421 barrels are coming from the Thomas lease, 5602 barrels from School Land No. 24, and 105 barrels from School Land No. 25. Total production of the field is 16,061 barrels, with the Carter Oil Co. second in output with 4100 barrels. The two remaining producers in the field are Wentz Oil Corp., with 108 barrels and Twin State Oil Co. with 190 barrels.

The Gypsy Oil Co. No. 1 Herbig, the deep test a half-mile east of the discovery well, is standing at 4842 feet, waiting for cement to set, and will be drilled in as soon as this waiting period is over. The same company's No. 1 Chambers, an interesting semi-wildcat north of the field, is now looking as if it might make a well, as it had 1200 feet of oil in the hole at last reports. This well got a sand at 4251 feet and was drilling ahead at 4252 feet this morning. If a good well is gotten here, it will make a great deal of difference in the outlook for the Thomas field.

An interesting development near the Papoose field, about which little has been heard lately, is that of the Transcontinental Oil Co. and Fuhrman Petroleum Co., in the NEc NW SW of 26-9-9. This well is flowing 35 barrels an hour in the Papoose sand topped at 3360 feet and drilled only eight feet in. A number of dry holes have been drilled in the general area lying south of the Papoose pool, but this well appears to have hit the pay at last. It is probable that a good deal of drilling will ensue immediately as a result of this well.

In the Burbank field, which is another one that has not broken into these columns for a long time, the Prairie Oil & Gas Co. and Comar Oil Co. drilled in a northeast extension well that made 1460 barrels the first 24 hours, in the SWc of 8-27-6, after getting the sand at 2960 feet and drilling to 2980 feet. Locations to north and east have been made and will be drilled at once.

The Harris & Haun well, mentioned last week as possibly opening up a new pool in the old Blackwell shallow gas field, petered out entirely during the week, and is not making anything now, according to latest reports. It is drilling deeper and has reached a total depth of 3935 feet. The showing it had was in the Burgess at 3895 feet, and, while it was of short life, lasted long enough for some acreage and royalties to change hands at pretty high figures.

Western Refineries Convention March 2

TULSA, Nov. 9.—The annual convention of the Western Petroleum Refiners Association will be held at Fort Worth on March 2, 3 and 4, 1926, it was announced today by Howard Bennette, managing director. Headquarters of the refiners and all sessions will be held at the Texas hotel.

Fort Worth was unanimously chosen by a mail vote of the membership of the association. The 1925 convention was held at Kansas City.

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Co-operate with Government to Conserve Petroleum, Urged by Requa

CLEVELAND, Nov. 9

SIX suggestions for a program for conserving the nation's oil resources, upon which he says the oil industry and the government should unite, are made by Mark L. Requa, mining engineer and head of the Oil Division of the U. S. Fuel Administration during the war, in his reply to the report on Supply and Demand of the American Petroleum Institute Committee of Eleven which was submitted to the Federal Oil Conservation Board at Washington.

Mr. Requa is the second individual to offer a detailed analysis or criticism of the Committee of Eleven report which has been made public, the other being Earl Oliver, former executive of the Marland interests and now an independent operator of Ponca City, Okla. Mr. Requa's suggestions are:

1.—Conservation of the oil in the ground until needed.

2.—Elimination of petroluem as fuel in competition with coal as far as practical.

3.—Utilization of the conserved petroleum for refining into gasoline and lubricating oils.

4.—More efficient consumption of petroleum products in internal combustion engines.

5.—Reclamation of lubricating oils and other similar conservation measures.

6.—Increase of prices to keep pace with decrease in volume.

The critical study which Mr. Requa has published of the Committee of Eleven report had only a small circulation, as a limited edition was printed and given only to his friends in the oil industry.

The greater part of his booklet is devoted to discussion of the conclusions drawn by the Committee of Eleven from the exhaustive data supplied to it by the technical sub-committees appointed to study the industry as it is today and to set up estimates, based upon existing data, of future supply and demand.

"Will the United States face a petroleum shortage within a comparatively limited period of time?," is the opening sentence in Mr. Requa's discussion. "President Coolidge, in effect, asked this question when he appointed the Federal Oil Conservation Board, consisting of Secretaries Hoover, Weeks, Wilbur and Work.

"The American Petroleum Institute, through its 'Committee of Eleven,' has attempted to answer the question in its report just published in book form under the title of 'American Petroleum Supply and Demand'. The book is the most complete and authentic statement of the petroleum situation that has been published and full credit should be given to those who collaborated in its compilation. But the book itself and the conclusions approved by the Committee, in its letter of transmittal, show such wide divergence, as between the facts as construed by the Committee, and as they might be construed by an ordinary citizen statistically inclined, that the question immediately arises as to which is the correct picture—the book or the 'Summary of Conclusions'.

"The 'Summary of Conclusions' indicate that an unlimited supply of oil will be available for an indefinite period. The book proves equally emphatically that there is no satisfactory substitute for petroleum from wells, and that, without the flush production from new fields, the industry cannot meet the ever mounting demand, save by importing oil from foreign countries, using oil made from shale, coal or other substances, or devising new methods of production, now largely unknown.

"The substitutes proposed are shown to be of dubious character, to involve many unsolved technical questions, and, in any event, obtainable only at greatly increased cost. As to the never-ending question of adequacy of reserves, the conclusions of the Committee are so vague as to indicate the utter impossibility of any satisfactory answer ever being given. The book, on this most vital point, is far less optimistic than the conclusions, indicating as it does that a large part of the territory listed as 'possible' by the Committee will never produce any appreciable quantity of oil.

"Reasonable caution, therefore, would indicate that there is only one safe course to follow. That is conservation of what crude petroleum we have, and its utilization only under the highest degree of efficiency. To this extent the book justifies the President in appointing the Federal Oil Conservation Board.

"The whole discussion indicates the necessity for co-operation between the government and the industry in making possible a program of rational conservation, highest utilization, and most efficient methods of consumption. In the light of the facts presented it would seem necessary for the industry to present such a program as a simple matter of self defense."

Here Mr. Requa devoted several pages to setting forth the letter of President Coolidge appointing the Federal Oil Conservation Board, in which were made several statements concerning the necessity for conservation, both as safeguards to industrial life and to the national defense. After quoting the letter of the president, Mr. Requa says that the Committee of Eleven, in its conclusions, failed to make convincing reply to the president's remarks.

Mr. Requa remarks upon one sentence in paragraph six of the President's letter. It reads:

"The oil industry itself might be permitted to determine its own future."

This, he says, is approval of the old slogan of the oil division of the United States Fuel Administration which was:

"The oil industry can govern itself wisely and well if it will."

"The Committee," Mr. Requa says, "has failed to grasp the golden opportunity and offer a constructive program to meet the suggestions contained in the letter of the President. This may be a later development as the result of conferences that will probably be held in Washington. Reading the letter of the President in connection with the Committee's report indicates that further steps must be taken. In the light of the report there should be: (Here follows the six suggestions given at the start of this article.)

Mr. Requa then took up the "Summary of Conclusions" one by one and commented upon them. The comments are somewhat lengthy and are here given only in part.

1. "There is no imminent danger of the exhaustion of the petroleum reserves of the United States." (Committee statement.)

Reserves Incalculable

(Requa comment) "Unending argument has waxed and waned regarding this subject of reserves. The Committee itself makes the following statement: 'The future supply of crude oil cannot be blocked out and drawn upon as needed as in the case of oil shales and lignites'. This sentence succinctly states the entire difficulty surrounding the petroleum industry. This very fact would argue in behalf of the necessity for proper conservation of what reserves are already known, and what may here-

(Continued to Page 51)

(Continued from Page 46)

after be found. The problem of reserves is, in short, not capable of any definite answer. No one with any knowledge of the industry thinks for a moment that other oil fields will not be found in the United States, but when, and where, and what their production will be, remain for the present, at least, an impenetrable mystery.

"If the word imminent as used by the Committee means within the next year or the next few years, that statement is correct; but the word imminent as defined by the petroleum industry and as defined by the government may mean two very different things. It is the government definition that must apply and such definition must obviously mean decades and generations as against the industrial definition which would mean months or years."

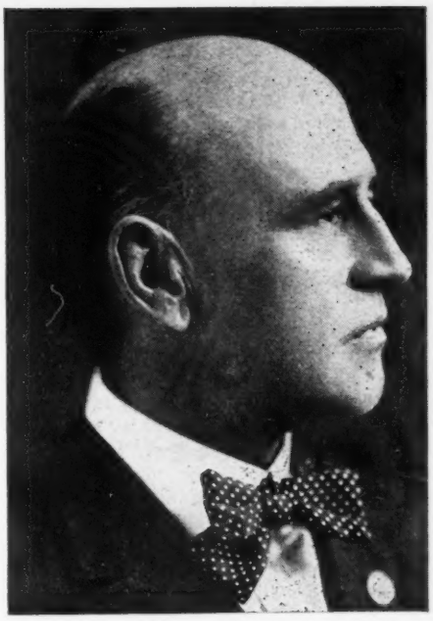
2. "It is reasonable to assume that a sufficient supply of oil will be available for national defense and for essential uses in the United States beyond the time when science will limit the demand by developing more efficient use of, or substitute for, oil, or will displace its use as a source of power by harnessing a natural energy." (Committee statement.)

(Requa comment)"Justification of this statement rests largely upon the belief that science will eventually develop substitutes for petroleum or entirely displace its use by 'harnessing a natural energy.' Just what is meant by 'harnessing a natural energy' perhaps demands a more explicit explanation from the 'Committee of Eleven.' That the evolution of science, constantly going on, is leading us towards greater and greater industrial development is admitted without debate. It opens up for discussion, however, the whole field of synthetic chemistry and we must equally remember that, due to the industrial era, now hardly a century old, the peoples of the world are, in all probability, consuming in one year more mineral raw materials than were consumed in the first eighteen centuries of the Christian era. This consumption so far as the United States is concerned roughly doubles every fifteen to twenty years. In the case of petroleum this increase has been much more rapid.

Rely Only On the Known

".....It must be understood that the welfare not only of present generations, but of future generations, should be given relatively equal weight by government and that the possible manufacture of any or all minerals or mineral derivatives by synthetic process should be given no weight at all; although recognized as among the possibilities that may be worked out by the inventive genius of future generations. It will be time enough for government to alter established policies, to meet such conditions, when they are proved practical and not nebulous theories, founded in part upon the inability to offer any better alternatives."

3. "Current supply and demand cannot stay in balance, since the amount of both supply and demand are constantly changing. Generally, current supply will exceed or be less than current demand, creating surplus or shortage; either condition will be reflected in price, but price will in time correct either condition." (Committee statement)



Mark L. Requa

As mining engineer, oil producer, general manager of a copper company, railway builder and former executive of the Sinclair Consolidated Oil Corp., Mark L. Requa possesses a background of experience in the developing and utilization of mineral resources. His greatest public contact came during the war, when he was appointed by Dr. Garfield to head the oil division of the United States Fuel Administration. In the discharge of his duties in this difficult post, he gained the confidence and respect of oil men the country over. In the accompanying article, which is made up of parts of a recently published booklet by Mr. Requa, he discusses the interpretations made by the Committee of Eleven of the American Petroleum Institute in the recently issued report on the supply and demand of petroleum.—Editor.

(Requa comment) "The statement by the Committee in this paragraph that price will in time correct either condition is true within certain limitations, but we found during the war that conditions may arise when price does not govern. Conditions may be such that an article cannot be secured at any price. This is true as to mineral raw materials, which are a wasting asset, and which, once exhausted, cannot be replaced at any price, unless our synthetic friends make good in the meantime. Assuming that the time comes, as it must come, be it imminent or far removed, when the petroleum industry will be unable, due to exhaustion of reserves, to find each year the flush production necessary to maintain existing output and meet normal increase, the price of the product might go to a point so prohibitive as largely to paralyze the American automotive industry which has become such an important and significant part of our modern industrial and social life. It may be said that foreign sources of supply will be drawn upon; it may be pointed out that oil from shale or coal, or both, will meet any deficiency; but in any such contention the time element must not be overlooked, nor must it be overlooked that substitutes are far from being as satisfactory as our present sources of supply."

4. "Petroleum recoverable by present methods of flowing and pumping from existing wells and acreage thus proven consist of five billion, three hundred million barrels of crude oil." (Committee statement)

In Terms of Years

(Requa comment) "It must come as a distinct shock to many people to be told on the very highest authority that the proved oil territory of the United States is capable of producing a supply sufficient for less than eight years, for this is exactly what the statement means when it says petroleum recoverable by present means from proven territory is estimated at five billion, three hundred million barrels. We consumed in the year 1924 approximately seven hundred million barrels, and eight times this would be six billion barrels; so the known reserves of petroleum in the United States are capable of supplying our requirements for about eight years, if it could all be produced within this period of time. This, however, is an impossibility. These fields will continue to yield over the next half century and possibly for an even longer period. They will shortly, and do to a very great extent today, make up the settled production from which one-half of the oil of the United States is produced; the other half must come from sources now unknown but which will be discovered in the future for at least a considerable number of years to come. No one can more clearly show the vital importance of flush production than is shown in paragraph four above quoted."

The Residue Reserve

5. "It is estimated that after pumping and flowing there will remain in the area now producing and proved twenty-six billion barrels of crude oil, a considerable portion of which can be recovered by improved and known processes such as flooding with water, the introduction of air and gas pressure and mining, when price justifies." (Committee statement)

(Requa comment) "It is entirely probable that there will be remaining in the known oil fields very large quantities of oil after the wells have reached a negligible production in barrels a day. Some portion of this will undoubtedly be recovered, but at costs far beyond probable costs of oil from either shale or coal.

"To the mining engineer familiar with the character of formations to be passed through in sinking shafts and mining petroleum by drifts and levels as in metal mines, the problem seems to be well nigh insolvable. Swelling ground, quicksands, gas, enormous water flows, and the difficulties attendant upon them are not calculated to impress the mining engineer with any enthusiasm as relating to mining any of these deposits at considerable depth and at any price

within commercial limits. As to methods to be used in Mid-Continent and Western fields for producing some of this remaining oil, it can safely be said that there is little data available upon which to base any reliable estimate. The subject being entirely in the realm of the speculative is, therefore, inacceptable in determining a national petroleum policy. But even admitting that these things are possible, it is fairly obvious that the yield will be so small as to afford but an insignificant part of the quantity required to meet future demand. Again the significance of flush production is emphasized."

6. "Improved methods of deep drilling below oil sands now producing will disclose in many areas deposits not hitherto available, which will be tantamount to the discovery of new fields. Improved methods of producing have been perfected which will make possible recovery of oil from below these lower levels. The limit of deep drilling has not been reached." (Committee statement)

(Requa comment) "It is quite possible that deeper exploration in known fields will produce large additional quantities of oil. In fact, this is one of the most tangible sources of future supply and deserves all encouragement and experiment. The significance, however, of new territory cannot be overestimated and the committee recognizes it when it says that, 'had it not been for the remarkable increase in the average initial flow of wells brought in by exploration in the past fifteen years, the increase of demand during that period, because of the tremendous development of the automobile industry, could not have been met.'"

7. "The major oil reserves of the United States lie in some one billion, one hundred million acres of lands underlain by sedimentary rocks, and not fully explored, in which geology indicates oil is possible. With extended search, new supplies will be found therein." (Committee statement)

Too Much Territory

(Requa comment) "This statement is somewhat optimistic and in a measure misleading. Certainly if we compare this one billion, one hundred million acres with the three million, two hundred and forty-four thousand acres given as producing and proved, and in connection with it consider the vast amount of wildcatting which has been done and which has disproved large areas, we shall inevitably be forced to the conclusion that very much the larger part of this acreage will not produce oil in commercial quantities. It has been demonstrated that there are vast areas of oil bearing rocks that contain some oil, but not enough to make commercial production possible. Concentration of this oil in folds of the earth is a recognized essential to commercial production. To the mining engineer, the matter is perfectly plain when he considers the concentration that has taken place in making the gold placers that have in times past been so prolific as a source of gold, but most of which are now exhausted. The original rocks contained probably but a cent or less a ton, yet through water action and weathering, this gold was concentrated into areas yielding dollars a ton as against cents in the original rock.

"The condition is similar with regard to concentration of petroleum and it can be stated, without fear of successful contradiction, that out of one billion, one hundred million acres a very small part will ever produce petroleum in commercial quantities. In fact, the book itself explicitly states that only a very small part of the total area of one billion, one hundred million acres will become producing territory, or contribute to our supply of crude oil, a statement that might have been included as part of Section 7 of the 'Summary of Conclusions.' At intervals new oil fields will be found in some part of this one billion, one hundred million acres, but when or where and of what size, no one knows."

Well Oil Substitutes

8. "The Nation has an additonal reserve in the vast deposits of oil shale, coal and lignites from all of which liquid fuel and lubricants may be extracted if and when the cost of recovery is justified by the price of these products. These deposits are so huge that they promise, under conservative estimates, an almost unlimited supply." (Committee statement)

(Requa comment) "The report estimates that within the United States there is something like four hundred billion short tons of oil shale from which about one hundred and eight billion barrels of crude shale oil can be recovered yielding twenty-five billion barrels of motor fuel, or about eleven gallons of shale oil to the ton of shale, of which two and one-half gallons would be motor fuel. As to the cost of this product, exact estimates are not now possible, but we can form a rough idea by taking the costs of the steam shovel porphyry copper mines and applying them.

"Making due allowance for the cost of mining and treatment, it seems probable that oil from shale cannot be produced for much under eight dollars a barrel, or around twenty cents a gallon. To this would have to be added the costs of refining and distribution, which would include scrapping of a large part of the present equipment of the petroleum industry, the investment of an enormous amount of capital in a new equipment with consequent increase in overhead costs."

9. "While this report is confined to the petroleum supply and demand within continental United States, the importance of imports cannot be ignored. Countries to the south are known to have large petroleum resources, for the output of which the United States is a natural market and the supply therefrom must inevitably have its influence on the consumption of American reserves." (Committee statement)

(Requa comment) "Enough has been said to indicate the enormous importance of imports as a future source of our supply. There is no doubt but what there is available throughout the world indefinite quantities of petroleum, certainly enough for a very considerable period of time; but here again any attempt to forecast the quantity becomes an absurdity. There are several objectionable features to these sources of supply, the principal one of which is that they are in foreign countries over which the United States has no control. In time of war they would be closed in the event that the country was hostile to us and they would be equally closed unless we had complete command of the sea. The lessons learned during the World War prove beyond any question the necessity for adequate reserves of petroleum and adequate transportation therefor. There was enough oil in Oklahoma and California to have supplied any Mexican deficiency, but it might as well have been in the moon so far as our ability to transport it was concerned."

10. "The availability of future petroleum supplies from the vast area of land mentioned above depends upon adequate incentives to the exploration which in the past has given the nation a sufficient supply of petroleum, in peace and in war, throughout the history of the oil industry, from its inception in 1859.

"There must be:

"(a) Security in the ownership of oil lands and of the right to lease.

"(b) Conditions of exploration and development by owners or lessees permitting exercise of initiative, liberty of action, the play of competition and the free operation of the law of supply and demand.

"(c) Prices that will provide a return to producers, refiners and distributors commensurate to the risks involved and the capital invested." (Committee statement)

(Requa comment) "Agreed to as too obvious to need comment except as to (b). It has already been shown that the law of supply and demand cannot be relied upon because of the wasting character of the material involved and that conservation of what we have must be practiced."

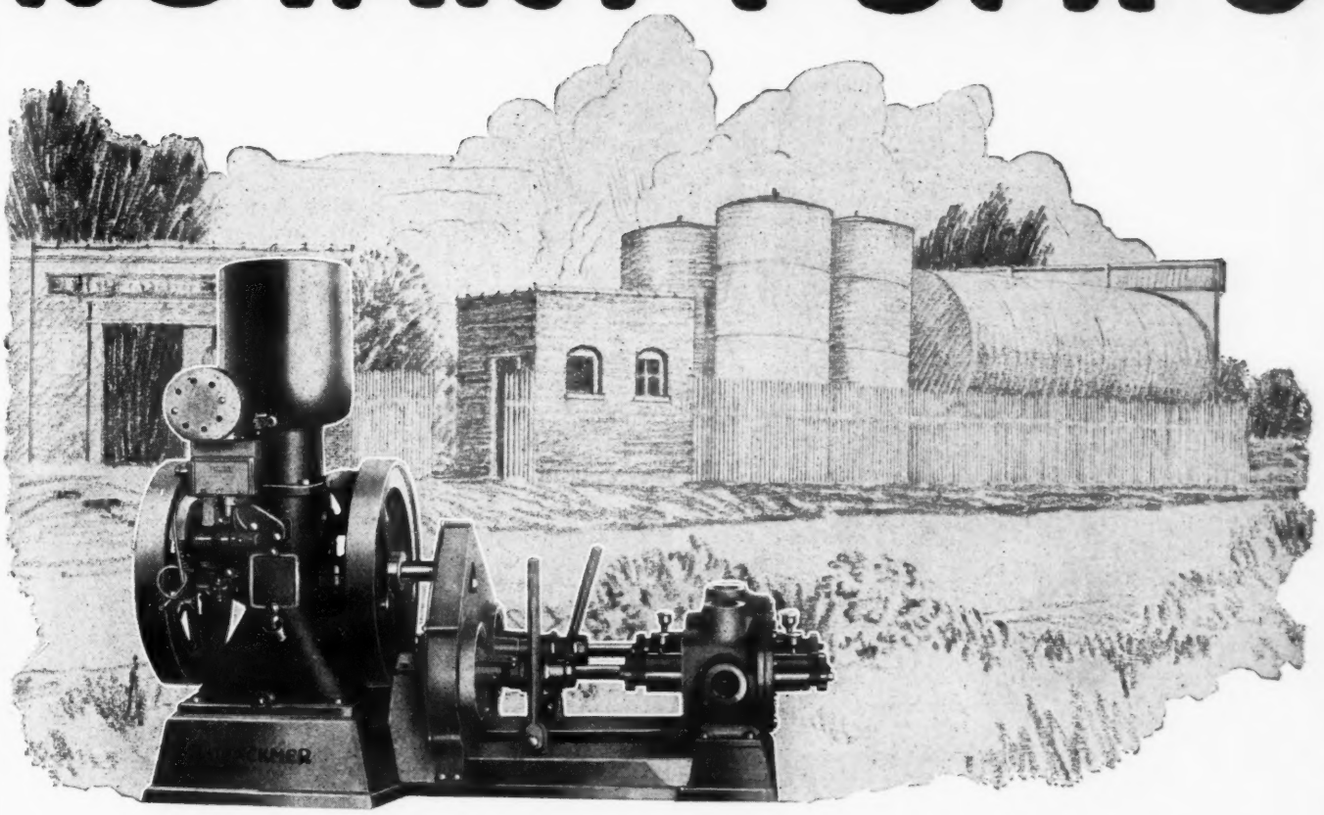
11. "The supply of petroleum will be made to go much further through more efficient utilization. Automotive experts state that the mileage of the motor car per gallon of gasoline may be doubled through structural mechanical changes, when price justifies such changes. Improved mechanics will also result in smaller consumption of lubricants." (Committee statement)

Would Regulate Use

(Requa comment) "We now come to one of the two great possible reforms in the utilization of our petroleum products. It is emphatically the function of government, both federal and state, to see to it that such regulations are put in force as will ban the use of any but the

(Continued on Page 56)

BLACKMER ROTARY PUMPS



Cut the Cost of Handling Oil

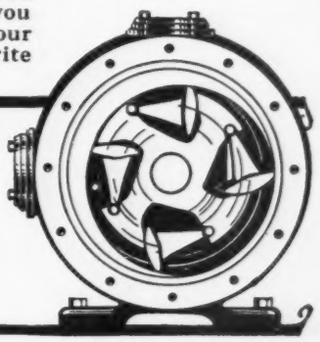
Blackmer Rotary Pumps are used by hundreds of large and small oil companies because these pumps operate very economically.

Blackmer construction, based on the Blackmer Principle of automatic take-up-for-wear, keeps the Blackmer in correct adjustment. Initial pumping efficiency is practically maintained. The fact that Blackmers are light running, require no priming, have no valves to leak, and seldom require gland packing, adds to their economy of operation.

These qualities account for the remarkable cost record of one cent per thousand gallons, established by Blackmers, and explain their very low cost average.

Blackmer Rotary Pumps are designed in many models especially suited to the pumping requirements of the Oil Industry. Capacities range from 3 to 500 G.P.M. Standardized Double Units, having capacities of 50 and 100 G.P.M. per pump, are particularly adapted to the bulk station.

Our engineers will be at the Louisville Convention, Booth 28, and will gladly show you how a Blackmer can cut your cost of handling oil. Or write our nearest Branch.



BLACKMER PUMP Co.

Grand Rapids, (Formerly at Petoskey) Michigan

New York	Baltimore	Milwaukee	Buffalo	Atlanta	St. Louis
Chicago	Philadelphia	Minneapolis	New Orleans	Houston	Louisville
Boston	Detroit	Pittsburgh	San Francisco	Kansas City	

Canadian Branch—London Concrete Machine Co., London, Ont.

(Continued from Page 52)

most efficient types of internal combustion engines. Known methods of economy in the utilization of lubrcants should also be enforced.

"There is comparatively little waste in the transportation, refining and distribution of petroleum products. Whatever waste there is, and it is a serious waste, is in the unnecessary production of petroleum and forcing the surplus into the fuel market in competition with coal.

".....The book indicates that we are consuming in the form of fuel approximately three hundred and seventy-eight millon barrels annually, an amount roughly equal to one hundred million tons of coal. There will, perhaps, always be a certain percentage of residuum left for fuel purposes after refining, but this can be enormously decreased, as the book clearly shows. In oil that is burned for fuel today we are destroying as much as 50 per cent, or perhaps more, of potential gasoline, that could be recovered by cracking, and from 20 per cent to 35 per cent of lubricating stocks. The refining problem is a highly technical one and cannot be herein discussed in detail. Suffice it to say, however, that with government co-operation, and it can be brought about in no other way, unsatisfactory conditions could be relieved within a comparatively few years, and in a manner highly beneficial to both the public and the petroleum industry."

12. "Through improved methods, principally the process known as 'cracking,' the refining branch of the industry has already increased the yield of gasoline, now the major product of petroleum. Through further improvements and extensions the supply of gasoline will be augmented still further by the 'cracking' of fuel oil. In consequence the supply of fuel oil will be correspondingly diminished, thus eventually removing fuel oil from competition with coal." (Committee statement)

Present Limits to Cracking

(Requa comment) "There is an econonmic principle involved in the question of 'cracking' that very definitely limits the quantity. If there is a surplus of crude oil and prices are low, the price of gasoline will not justify 'cracking' of a considerable part of the product, which will be rejected and sold for fuel purposes in competition with coal, of which there is a relatively unlimited quantity, and which now, as never before, needs this additional tonnage. The problem is purely an economic one. When the price of gasoline justifies it, greater and greater quantities of crude will be 'cracked' and as the price justifies it, better and more efficient methods will be discovered for making available, in the form of gasoline, constantly increasing quantities of the barrel of petroleum. The whole subject may be stated in one sentence: Control of production, increased efficiency in consumption which will give the consumer the same power at little or no increase in price, even though the price of the product is materially advanced."

13. "Waste in the production, transportation, refining and distribution of petroleum and its products is negligible." (Comittee statement)

(Requa comment) "Waste in the production and consumption of petroleum consists of two items so overpowering that all others may be ignored. They are:

"(a) Uncontrolled production that forces surplus oil, that should be conserved for gasoline and lubricants, into the fuel market in competition with coal.

"(b) The low standard of efficiency of the internal combustion engine.

".....In closing, a definition of what true conservation really is will not be out of place:

Conservation Defined

"'Conservation is not hoarding but the wise use of natural resources and it implies not merely the preserving in unimpaired efficiency, but also a wise and equitable exhaustion with a maximum efficiency and a minimum waste, and demands intensive rather than extensive use. Taking cognizance of equitable distribution, it aims to bring about social justice and means the greatest good to the greatest number and that for longest time.'

"Such orderly consideration of the problem as above outlined could be productive only of good as compared with the disorderly hysteria that must come through unpreparedness when the conflagration is upon us. The six suggestions (previously set forth) are made for the purpose of starting a discussion. Whether they will be found to agree with those finally proposed by the petroleum industry is of no importance. What is of importance, however, is that the industry in co-operation with the government agree upon a program for adoption. It is the function of the industry to suggest such procedure."

Features Attract Trade

INDIANAPOLIS, Nov. 5.—The Plaza Oil Co. of Indianapolis, which operates a large and complete crankcase and service station here, is using the new steam process method of cleaning out differential and transmission, and refilling with winter lubrication. As a result of its advertising this feature the company has doubled its sales, according to R. H. Daugherty, general manager.

Another feature that attracts much attention and produces comment among motorists at the Plaza company's service station, is the display it uses in its large windows, which reproduces art pictures in water color, supplied by the Pennsylvania Grade Crude Oil Association, Oil City, Mr. Daugherty states.

WHITEFISH, MONT.—John L. Akey, Inc., has completed bulk storage here. The company sells Pepolene gasoline and Naco oils.

"CUT OIL"

is a problem in CHEMISTRY

An "emulsion" represents a condition of a liquid which can be fully, scientifically and economically corrected by use of the chemical process. Use TRET-O-LITE process when you have cut oil and tank bottoms that require treating.

Wm. S. Barnickel & Co.
St. Louis, Mo.

Tret-O-litE

Reg. U. S. Pat. Off.

PROFESSIONAL CARD DIRECTORY

The Cost is small

1-inch card $25 a quarter in advance—$100 a year for 26 issues. 2-inch card $50 a quarter in advance—$200 a year for 26 issues. Larger space increases proportionately. Single insertion rate $5.

W. L. GOMORY
Chemical Engineer
Consulting Petroleum Technologist
Inventor Gomory Cracking Process
Licenses Solicited
Refinery Design
Peoples Gas Bldg. - Chicago

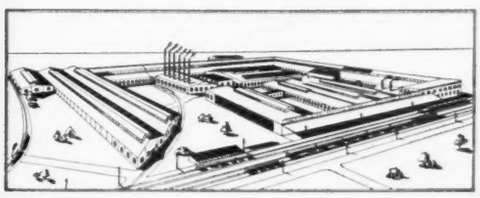
L. G. Huntley Stirling Huntley
HUNTLEY & HUNTLEY
PETROLEUM GEOLOGISTS AND ENGINEERS
Frick Building PITTSBURGH, PA.

what is back of it

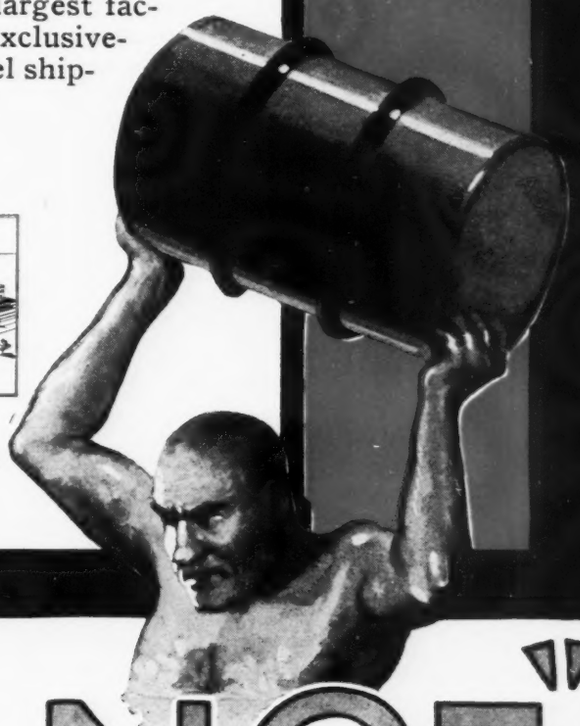
BACK of every successful business you will find men with whom you can deal, knowing you will get complete satisfaction.

In addition to this, every Defiance Steel Barrel is backed by years of experience—years of knowing the shipping problems of the Oil Industry and how to build the right package at the right price.

And because of all this,—in back of the Defiance Barrel is the largest factory in the world, engaged exclusively in the manufacture of steel shipping packages.



THE AMERICAN STEEL PACKAGE CO.
Defiance, Ohio



"DEFIANCE"

We See By The Papers—

Unconscious nonsense concerning the oil industry from the press of the nation.

He is Now at Liberty

Probably this from the Sioux City, Ia., Tribune, is a typographical mix-up, but it opens an interesting line of thought as to how state gasoline sales directors might be handled.

Mitchell, S. D.,—Part of the equipment of the state gasoline station to be operated at Woonsocket was shipped there Tuesday by F. W. Marmon, state gasoline sales director. The consignment consisted of tanks and unloading equipty last May. He is at liberty under $20,000 bond.

The Future is Serene

According to the Alton, Ill., Telegraph the head of the Standard Oil Co. of Indiana told employes of the company in a meeting at Casper of some of the safeguards against an oil shortage, adopted by his company:

Col. Stewart told of the Standard Oil merger with the Panama Oil interests which are now practically controlled by the Standard Oil Company. He said that there was no fear of running short of the oil supply with valuable interests in Panama. With the Panama interests, the production of crude oil supplies could be forced in case of a falling-off of supply in the United States Oil fields. Panama oil could be secured in unlimited quantities and could be shipped to New Orleans in tanks steamers and from there could be distributed in the regular manner through pipe lines leading to the various refineries, he showed.

An Undue Advantage

The Del Rio Valley, Tex., Herald, in reporting a recent meeting of stockholders of a local oil company, tells of one dramatic episode that occurred:

After this Mr. Dumas took the floor and made an eloquent and impressive address, calling on those present to testify to the fact that he had raised money last spring when the "hot, scorching sun" was causing the sheep and goat men to lay awake at nights. "I went to the little man and used my power of a psychological mind on their minds and got the money to continue to drill the well," Mr. Dumas exclaimed in loud and bold terms. The speaker felt sure that oil would be discovered within 50 or 100 feet and challenged the Rio Bravo people, the citizens of Del Rio and the whole world to go down another 50 or 100 feet to ascertain what would be found. Mr. Dumas attempted to quote many geologists on what was in the well, but two times was requested by Dr. Rose to confine himself to the business in hand, and not take up too much time. This the speaker graciously stated that he would be pleased to do.

Straddling the Vein

Mullen, Neb., Tribune tells how well located is a test near Chadron:

They expect to strike the strata or subterranean oil flow that connects the Casper and Oklahoma fields at this point at a depth of about 2000 feet. Work was commenced on the new project some time ago but when down about 700 feet they lost a drill and was unable to fish it out. This necessitated making a new start and when Mr. Jacobson left a week ago they had drilled about 400 feet.

They Electrify Easily

Taylorville, Ill., Courier tells of the commotion raised by a Casey banker:

Marseilles, Ill.—Local residents were electrified today over the visit of J. E. Turner, a banker of Casey, Ill., who came here to look over contiguous oil well prospects. With drilling operations already under way, Mr. Turned expressed himself as being "favorably impressed" with the prospects. Casey itself was made prosperous by oil production.

They Absorb it More Quickly

Reporter for the Tulsa World takes a fling at metallurgy:

The tool-dressing demonstration conducted by the United States bureau of mines just outside the Scientific and Technical building is surrounded daily by a group of "toolies." The method used is heat and it is especially applicable to fishtail bits.

IS THE OLD GENTLEMAN GOING TO BE INTERESTED?

THE EDITORS' VIEWPOINT

Oil Statistics Improving

THERE has been great improvement in the compiling and issuing to the oil industry of its current statistics, and none too soon. Oil executives are fast learning the value of accurate and up-to-date statistics in gauging their own operations. As these instruments for charting a business course are improved and made more useful to a student of the industry, they will come into greater use, and the quicker a man will be to fit them into his own method of planning his business for the future.

Since the job of getting out the government statistics on the oil industry was taken over by the Department of Commerce, Secretary Hoover has improved immeasurably the value of the monthly report on crude production and stocks and on refinery operations.

Starting out by combining the two reports, so that a true picture of the situation with regard to increase or decrease of oil inventories for the entire country could be obtained, other improvements have been made such as giving current figures on natural gasoline production and, just lately, an estimate on the amount of benzol being used for motor fuel.

It is to be hoped the time taken in collecting and compiling the figures can be cut down, or at least, a preliminary estimate issued on such important items as total crude production and gasoline output within a few days after the close of the month. However, the report as it now stands is worthy of close study by students of the oil industry. It is featured, with the government figures given in detail, and an analysis, regularly in National Petroleum News, with charts in color showing changes in the gasoline and crude situation.

Another improvement in giving the oil industry its statistics quickly has recently been made by the American Petroleum Institute. This organization has now worked out completely its method of securing crude production estimates for the entire country weekly, and has speeded its handling of this report so that the complete figures, by pools, for all districts as of Saturday are available by three days later.

These figures are by far the most accurate and up-to-date figures on production the oil industry is offered. They are gathered from reports made by the principal operating companies in all districts, collected by wire and issued promptly to show the trend of crude output for the entire country. The current report is also carried in detail in National Petroleum News weekly.

This publication's own exclusive report on refinery operations of Mid-Continent plants selling on the spot market has been recognized as of great value in enabling those refiners to gauge their operations to avoid manufacturing and throwing on the market a great amount of goods when a surplus is already in sight and in informing others as to the course of the market. This report is made available within a few days of the time the actual figures were gathered. Its up-to-dateness adds greatly to its value.

In addition to this current material, the Western Petroleum Refiners Association, among other organizations, adds to the statistical information now available to the industry by putting out an analysis of the production and market for refined products that should be extremely helpful to executives.

All this material can be made of great value to the man who is figuring on future markets, either as head of a company who must plan weeks and months ahead, or as a student of the general oil situation. And the signs point to an improving of these instruments of real service to the industry.—V. B. G.

New Phase of Pump Problem

THE question of how much responsibility the oil marketing company should take to insure that only its products are sold to the public through its pump equipment in dealers' hands is being given a good deal of consideration now. The Tide Water company probably started many to thinking along this line by its recent action in sealing its dealers' tanks, as a protection to itself and its reliable dealers from the selling of inferior or adulterated products as Tydol gasoline through Tydol pumps, by dishonest dealers. Even more recently there has come to hand complaints from motorists in the southeast, along the Florida routes, that they were being short-measured or sold inferior products through roadside pumps.

It is likely that operating gasoline pumps in connection with barbecue stands and soft drink counters, which has developed extensively the past year or so, is largely responsible for such complaints. This type of place is obviously run to catch the tourist trade. Regular gasoline and oil trade, it does not seem, would hunt out a place where selling oil products was only a side line with an attendant jumping from a barbecue rack to a pop stand to wait on trade. It appears that quick lunch stands are appealing more and more to the tourists over the longer stop necessary at an inn or restaurant.

With this one-time trade, the temptation to the right—or rather wrong—kind of proprietor is to substitute or skimp on measure, more so than with the gasoline pump at the garage or in front of the cross-road store, where some share of the trade is permanent and not of the tourist class.

This is perhaps a factor of the gasoline distributing business that will stand more attention in the future. A company can guarantee what is sold through its own stations, or through pumps of carefully picked dealers. Where pumps are passed out promiscuously, no such supervision can be maintained, however. Yet good will on the part of the public can be broken down for any company through substitution or short measure stuff coming through pumps bearing that company's emblems.

The small local dealer has always looked on the giving away of pump equipment by the big competitor as a great advantage to the latter. In more ways than one, though it's not an unmixed blessing, to say the least.—V. B. G.

AT LOUISVILLE

Lock Gate Valve—
Flanged or Screw
Types—Patented

BE SURE TO SEE THIS LATEST McDONALD TRIUMPH

—our "Pistol Grip" Self-Closing Hose Nozzle. Patent Pending.

Our company will be represented by our Messrs. Reeder, Jackson, and McCulloch, who will be glad to demonstrate any item of McDONALD oil handling equipment. Booth 38.

"The Home of the Swing Joint"

A. Y. McDONALD MFG. CO.
Dubuque, Iowa
Omaha Minneapolis Des Moines

Complete stocks also carried by:
Butler Mfg. Co., Kansas City
Preferred Utilities Co., 33 W. 60th St., New York
U. S. Flexible Metallic Tubing Co., San Francisco
Los Angeles, Seattle

Self-Closing Tank
Wagon Faucet

Curb Pump Swing
Joint—Listed by
Underwriters

Duplex Tank Vent—
Patented. Listed by
Underwriters

Oil Pump for Hand
or Power Operation

EST. 1856 McDonald

McDONALD

Signs Forecast Record Attendance at Louisville Convention

By Ward K. Halbert
N. P. N. STAFF WRITER

CHICAGO, Nov. 7

PRELIMINARIES of the annual convention and election of officers of the National Petroleum Marketers Assoc., which will be held Nov. 17, 18 and 19 in Louisville, Ky., are all finished and the home office of the organization at 624 South Michigan Ave., has been busied chiefly with taking care of reservations.

First consideration was given to members in the matter of getting close-in reservations, with the result that the N.P.M.A. is holding every room at the Brown Hotel not actually occupied by premanent guests. However, the association is helping any oil man (whether member or not) to get lodging at some other good hotel in Louisville, of which seven are within five minutes walk of the exhibit room.

The Louisville Armory will house the exhibits. It is near the Brown Hotel, which is N.P.M.A. headquarters. The exhibits this year consist of 74 displays which were all taken by 64 equipment companies. A list of these exhibitors is herewith published in National Petroleum News showing the booth number of each exhibit to expedite delivery of telegrams and mail and help those in attendance to locate persons they want to find.

The size of the equipment display, the volume of business expected to grow out of the meeting for those exhibiting, and the enthusiasm with which the trade has entered into this, the first N.P.M.A. convention in the South, all are based upon the success of other conventions. The organization is a consolidation of two former jobbers' organizations, and now is entering upon its fifth year under its present name. Each of these meetings has shown a slight improvement over the previous one since the organization meeting in the Drake Hotel, Chicago, in the late fall of 1921.

Meetings Grow Bigger

Gradually the conventions and exhibit outgrew the Congress Hotel and its convenient convention facilities in Chicago. Since the 1922 spring convention it has been necessary to hold the equipment exhibit in something bigger than a hotel ball room. That gathering was in Kansas City where experience taught the authorities that it was important to hold general sessions in the same building with the exhibition. St. Louis, Milwaukee and Cleveland have each entertained the oil jobbers since then. The attendance has grown in proportion by membership in the association. This year's meeting is expected to pass all others.

Brown Hotel, Louisville
All rooms in this hotel have been reserved for members of National Petroleum Marketers' Association

It has always been difficult to determine in advance, what may take place at an N.P.M.A. convention—especially an annual one. There is seldom any set program for the meeting, except that the president, L. V. Nicholas of Chicago, make a practice of setting forth in advance a list of topics for discussion. They are chosen by reason of their importance to the industry, taking the experience of the headquarter office as a barometer. The program is invariably a list of timely topics that the oil jobbers are interested in, or have been interested in during the year, for the sake of their bank accounts.

The conduct of these programs is in the way of a "round table" discussion. The man in the chair, or somebody else moved with the warmth of his subject, "starts the ball rolling" with an opinion, an experience or a speculation, and the list of speakers is then and there selected as they rise from their seats and want to say something. And the program is planned in much the same way this year. However there will be three formal addresses:

Three Prepared Papers

H. F. Brownell, head of the Brownell Corp., Sioux Falls, S. D., will address the convention on "Lessons We Must Learn from Mistakes Made in South Dakota." This address will certainly deal with the oil man's method of handling the political demagog and the office-seeking "friend of the peepul." Mr. Brownell has been through three years of the worst political persecution of the oil industry ever conducted by a state government. Facts gleaned from his wealth of experience will be of value to any oil man in any state where leather-lunged ward healers run for office.

John Rome Battle is also on the program. Mr. Battle is a lubrication expert of note. He is author of a text book on lubrication which has been published three times, and through magazine articles and technical pamphlets has made his name familiar in the oil business. His address will be on "Industrial Lubrication, Compounding, Etc." C. C. Parlin of Philadelphia, a national authority on group advertising, has consented also to talk before the N.P.M.A. meeting this fall.

Besides the addresses, nine specified topics have been singled out for discussion. They are;

(1) Where is our present price structure leading us?

(2) What makes a spot market?

(3) What makes a tank wagon price?

(4) What makes a service station price?

(5) Is rebating honest or industrially criminal?

(6) Is the refinery price system wrong—should the jobber be protected?

(7) What the association's collective buying department has done and what it can accomplish.

(8) The possibilities and advantages of joint national advertising, a coupon clearing house and nationalized policies.

(9) The proposed co-operative refinery.

Status of Co-Op Refinery

The proposition of a group of jobbers getting together and pooling their funds to build a refinery complete with cracking plant is not a child of the National Petroleum Marketers' Association, as such. However the men in whose minds the idea was conceived last August are nearly all members of the N.P.M.A. So far, it is understood a group of about a dozen oil marketers already have tentatively subscribed a fund of $1,000,000, if the project is approved, and employed a firm of engineers to make a thorough investigation of the feasibility of building a joint refinery. This proposition is probably the most interesting topic that will be brought up and "ventilated" at Louisville.

Bridge Parties Eliminated

Literature sent out assures members that Louisville is a good sized town, rich in traditions of the Old South, replete with good places to shop and dotted with good theatres where their

wives may while away their time if they bring them along. However, the association is not going to make any special arrangements to entertain the women. They are invited to come and take part in the sessions or entertain themselves otherwise, but the Louisville meeting is a business event.

On Tuesday, Nov. 17, the first day of the convention, there will be three business sessions. On Wednesday and Thursday there will be two business meetings each. The annual dinner dance will be held on Wednesday evening in the Ball Room at the Brown Hotel. All business sessions will be held in the assembly hall at the armory. The convention closes after the afternoon business meeting on Thursday to give the oil men a chance to catch night trains home.

Incidentally, the railroad fare from Louisville back home will cost each oil man only half fare if he will take advantage of the reduced rate plan offered. The rate reduction is the usual certificate plan offered to national conventions by railroads. It is managed in this way:

When you go to the railroad agent to buy your ticket to Louisville, pay him full fare one way. But ask him to give you a certificate showing that you are going to attend the National Petroleum Marketers Association convention. Take the certificate with you to Louisville and there get it validated. It will be valid when signed by some designated N. P. M. A. official. When that is done the certificate will pay half of your transportation home.

The Pennsylvania Railroad System has announced a special train will be run from Chicago to Louisville, leaving the Union Station at 11:05 p.m., Monday, Nov. 16 and arrive in Louisville at 7:30 a.m., Tuesday. Reservations on this train can be made by telephoning C. M. Trueb or C. R. James, Central-7200 (Local 191) Chicago.

Raymond Shaw, manager of the department of sales promotion of the N.P.M.A. has announced a complete display of all the association's merchandising plans and advertising projects will be on exhibit at the convention. Any oil man who wishes to know more about the advertising program may learn at the convention by personal interview with Mr. Shaw or with Sam Hunt, the association's advertising manager.

EXHIBITORS NATIONAL PETROLEUM MARKETERS ASSOCIATION CONVENTION

Milwaukee Tank Works	Milwaukee, Wis.
Fred G. Clark Co.	Cleveland, Ohio
J. G. Doty Pump Co.	St. Louis, Mo.
Indian Refining Company	Lawrenceville, Ill.
Progress Manufacturing Co.	Arthur, Ill.
Western Manufacturing Company	Oskaloosa, Iowa
St. Louis Pump & Equipment Co.	St. Louis, Mo.
American Can Company	Chicago, Ill.
Macbeth-Evans Glass Company	Charleroi, Pa.
National Petroleum News	Cleveland, Ohio
Tokheim Oil Tank & Pump Co.	Ft. Wayne, Ind.
Globe Manufacturing Co.	Battle Creek, Mich.
Dawes Electric Sign & Mfg. Co.	Pittsburgh, Pa.
Sterling Equipment Mfg. Co.	Cincinnati, Ohio
The Heil Co.	Milwaukee, Wis.
St. Louis Can Co.	St. Louis, Mo.
Au-to Compressor Co.	Wilmington, Ohio
Jay B. Rhodes Co.	Kalamazoo, Mich.
Gilbert & Barker Mfg. Co.	Springfield, Mass.
Quincy Compressor Co.	Quincy, Ill.
Bennett Pumps Corporation	Muskegon, Mich.
Fleckenstein Visible Gasometer Co. of Michigan	Grand Rapids, Mich.
Canfield Oil Co.	Cleveland, Ohio
Cincinnati Advertising Products Co.	Cincinnati, Ohio
Raymond Garage Equipment Co.	Adrian, Mich.
Blackmer Rotary Pump Co.	Petoskey, Mich.
Sharpsville Boiler Works Co.	Sharpsville, Pa.
Leader Iron Works	Decatur, Ill.
American Oil Pump & Tank Co.	Cincinnati, Ohio
Klean-Rite Auto Laundry Co.	Chicago, Ill.
Buckeye Iron & Brass Works	Dayton, Ohio
Hayes Equipment Mfg. Co.	Wichita, Kans.
Metal Hose & Tubing Co., Inc.	Brooklyn, N. Y.
A. Y. McDonald Mfg. Co.	Dubuque, Iowa
Fiske Bros. Refining Co.	New York, N. Y.
Merit Oil Equipment Co.	Cleveland, Ohio
Davis Welding & Mfg. Co.	Cincinnati, Ohio
Morrison Brothers	Dubuque, Iowa
United States Air Compressor Co.	Cleveland, Ohio
Stewart Bros. Paint Co.	Alliance, Ohio
Henry Vogt Machine Co., Inc.	Louisville, Ky.
National Recording Pump Co.	Dayton, Ohio
S. F. Bowser & Co., Inc.	Ft. Wayne, Ind.
Bassick Mfg. Co.	Chicago, Ill.
Correct Measure Co.	Rochester, Pa.
Caward Dart Company	Waterloo, Iowa
Williams Sealing Corporation	Decatur, Ill.
Amco Sales Corporation	Chicago, Ill.
Curtis Pneumatic Mach. Co.	St. Louis, Mo.
Visible Pump Co., Inc.	Findlay, Ohio
Proctor & Gamble Co.	Cincinnati, Ohio
Beacon Equipment Co.	Hamilton, Ohio
United States Pump Corporation	Cincinnati, Ohio
Guarantee Liquid Measure Co.	Rochester, Pa.
Economy Engineering Co.	Chicago, Ill.
Shotwell Pump & Tank Co.	Boston, Mass.
Graver Corporation	East Chicago, Ind.
Wayne Tank & Pump Co.	Ft. Wayne, Ind.
Roy Manufacturing Co.	Quincy, Mass.
Midland Specialties Co.	Chicago, Ill.
McSavaney Company	Springfield, Ohio
Chicago Tubing & Braiding Co.	Chicago, Ill.
Miller Petroleum Company	Kansas City, Mo.
Champion Pneumatic Machinery Co.	Chicago, Ill.

Automobile Output Turns Up in September

CLEVELAND, Nov. 6.—Automobile production turned upward in September following a slump in the August output because several large manufacturers, including Ford, were swinging over to the production of new models. Total production in September in the United States and Canada was 272,396 passenger cars and 60,363 trucks, as compared with 221,813 and 37,713, respectively, in August, and 358,554 and 41,773 in July. In September 1924, production was 263,528 passenger cars and 31,960 trucks.

In September passenger car production in the United States was 262,036 and 10,360 in Canada. Of the trucks 57,883 were made in the United States and 2480 in Canada.

N. Y. Gas Dealers Visit Bradford

ROCHESTER, N. Y., Nov. 5.—Members of the Western New York Gasoline Dealers' Association, who visited Bradford, Pa. on Oct. 26, were guests of the Kendall Refining Co. A dinner was given in their honor at the Hotel Holley and a luncheon at Masonic temple. In the afternoon they were taken on an inspection tour of the producing property and the refinery of the Kendall company.

The men remained in Bradford over night as guests of the Kendall at the Hotel Holley. Guests included Messrs. Sparks, Uebelacker, Reynolds, Montier, Schnable, Fuller, Heutter, Merchant, Rich, Hughes, Schubert, Paul, Barry, Cleary, Wallace, Wegman, Perkins, Stumpfhauser, Sabin, Hawley, McGreal, Bush, VanLone, Spaker, Yaky, Haitz, Tierylinca, Kettler, Miller, Bauer, Koetter, Teal and Wheeler; and Mrs. Perkins and Mrs. Hawley.

BUFFALO, N. Y.—Buffalo Grey Auto Stations, Inc., with headquarters here, is operating four stations, three of which are at Buffalo and one at Lockport. Its lubricating oil is under pressure the same as gasoline. Business is reported as being good.

G. D. Bowers Made Sales Manager of Panhandle

HOUSTON, Nov. 9.—George D. Bowers, for 14 years with the Pierce Petroleum Corp. or its predecessors and recently connected with its marketing office at Dallas, has become sales manager of the Panhandle Refining Co. at Wichita Falls. Mr. Bowers succeeds W. E. (Billy) Campbell, who recently organized the Panhandle Oil Co. of Arizona and is moving to Tucson.

Announcement of Mr. Campbell's resignation was published in the Oct. 14, 1925, issue of National Petroleum News.

Mr. Bowers is widely known in the marketing division of the oil industry in the southwest. Before going to Dallas two years ago he was stationed at Houston for three years in the Pierce Oil Co. offices.

HUNTINGTON, W. VA.—H. P. Harber has owned a service station here. He reports the weather to be fine which helps to make business good.

Gasoline Output Continues to Grow Faster Than Consumption

Staff Special

CLEVELAND, Nov. 7.

GROSS production of motor fuel in the United States in September was 938,300,000 gallons as compared with 1,005,200,000 gallons in August, according to the report of the Bureau of Mines. This gross production included natural gasoline output which was greater in September than in August and 6,000,000 gallons of benzol used in blending.

The current report was the first ever issued by the bureau which took cognizance of the amount of benzol, a coal tar product, used in blending motor fuels. However it does not take into account the volume of benzol used by jobbers in blending.

The output of gasoline at refineries was 906,100,000 gallons, a daily average of 30,203,000 gallons as compared with 972,700,000 gallons, a daily average of 31,377,400 gallons in August, a decline of 3.7 per cent. Use of natural gasoline by refineries increased from a daily average of 1,503,000 gallons in August to 1,911,700 gallons in September. Two causes for the increased use stand out; one is the lower cost of natural gasoline in September, and the other is the demand for a peppier gasoline because of the colder weather in September.

Production of natural gasoline increased in September, being 3,086,700 gallons daily average as against 2,970,900 gallons in August. Stocks declined almost 800,000 gallons during September falling from 12,877,000 on Aug. 31 to 12,084,000 gallons on Sept. 30.

Domestic demand for gasoline—that is, shipments from refineries—during September averaged 28,289,000 gallons as against 30,061,000 gallons in August a decline of 6.2 per cent but 18.1 per cent greater than in September, 1924. Output was 20.7 per cent greater than in September, 1924.

Both imports and exports of gasoline fell off in September as compared with August as is shown in Table No. 1. Compared with September, 1924, imports were 4,400,000 gallons greater, or more than double, but exports were 25,000,000 gallons less. Imports were abnormally small in both Septembers.

Gasoline stocks at refineries declined 26,000,000 gallons during September and at the end of the month stood at 1,514,150,000 gallons. The decline was 1.7 per cent.

48.3 Days' Supply

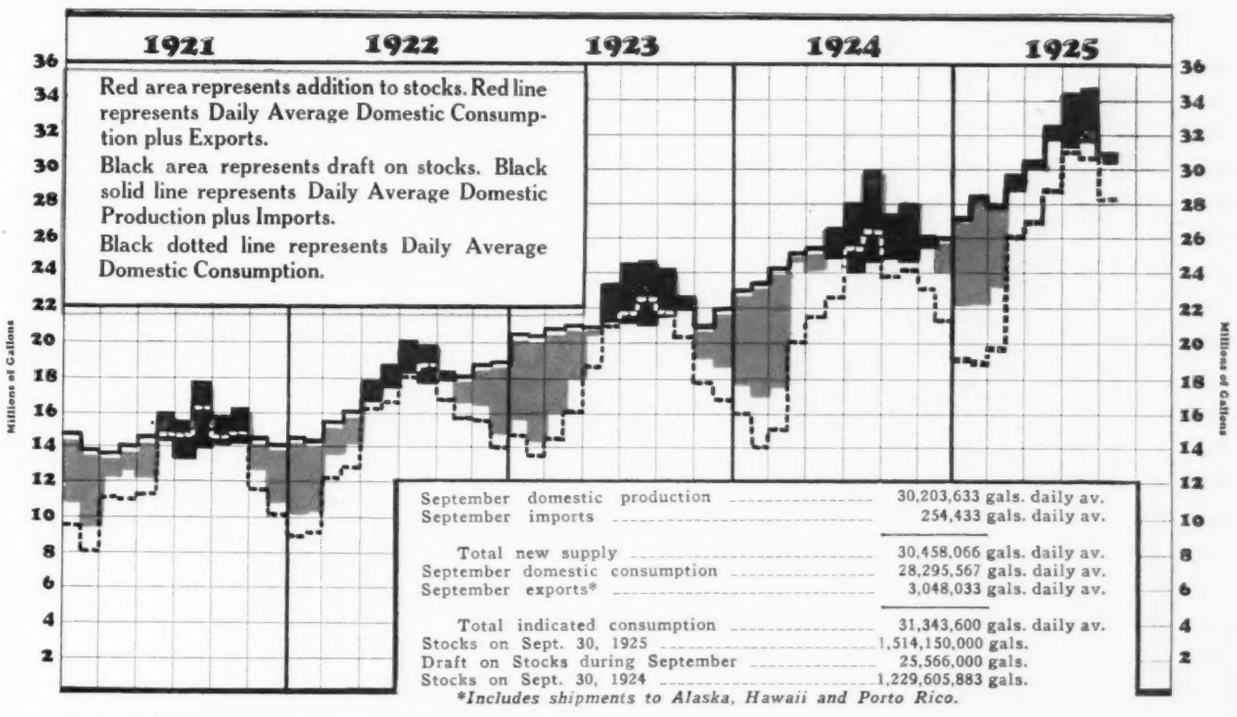
At the September rate of consumption—domestic deliveries and exports—stocks on Sept. 30 represented 48.3 days' supply while at the end of September, 1924, stocks according to the bureau's method of reporting statistics then, represented 44.2 days' supply at the rate of consumption, but in reality represented 49.5 days' supply when the 150,000,000 gallons of gasoline held by refining companies on the Pacific coast at bulk stations outside their refineries were considered. This volume of gasoline which is the refiners' normal stock at distributing stations was added into the country's gasoline stocks at the beginning of 1925 and has been reported by the bureau monthly since the first of this year. Stocks on Aug. 31, 1925, represented 45.2 day's supply.

The bureau's report does not contain the amount of gasoline manufactured by straight run process and the amount made with cracking processes. This information was not complete for September, it was stated in the report, but may be announced later.

Although output of gasoline declined only 3.7 per cent in September from August production, runs of crude to stills declined 3.9 per cent and runs of all oils 4.1 per cent from the August runs. This means a slightly greater yield of gasoline per barrel of charging oil in September than in August. The month's runs are shown in Table No. 4.

Runs to stills were decreased in every refining district except the Rocky

Gasoline Production and Consumption



Mountain district but production of gasoline was slightly less in that district in September than in August. Output of gasoline was less in every district except the Louisiana-Arkansas district where a small gain was made.

Biggest draft on gasoline stocks was in the Oklahoma-Kansas district where the decline was 19,000,000 gallons. The Indiana-Illinois district was second in reducing stocks, shipments exceeding production by 15,700,000 gallons during the month. Texas cut stocks 8,500,000 gallons and the Appalachian and California districts made reductions of 2,800,000 gallons each. Reduction in the Rocky Mountain district was 43,000 gallons. East Coast plants added 21,000,000 gallons to their stocks and an addition of 800,000 gallons was reported by the Louisiana-Arkansas district.

Table No. 1—Gasoline Supply, Demand, and Stocks

	Production	Imports	Exports	Domestic Consumption	Stocks
September, 1925	906,109,000	7,633,000	91,441,000	848,867,000	1,514,150,000
August, 1925	972,689,000	13,180,000	124,042,000	931,901,000	1,540,716,000
July, 1925	966,908,000	16,845,000	105,107,000	963,072,000	1,610,790,000
June, 1925	944,175,000	16,128,000	113,659,000	868,350,000	1,695,216,000
May, 1925	922,046,000	16,945,000	101,159,000	831,788,000	1,716,922,000
September, 1924	750,264,000	3,217,000	116,828,000	718,068,000	1,229,606,000
September, 1923	623,733,000	25,561,000	75,647,000	655,798,000	972,705,000

*Includes shipments to Alaska, Hawaii and Porto Rico.

Table No. 2—Supply, Demand and Stocks of Major Products

	Production	Imports	Exports*	Domestic Demand	Stocks end of period
KEROSENE (Gal.)					
July	193,471,000	79,000	72,367,000	149,534,000	444,020,000
August	187,984,000	45,000	81,685,000	148,874,000	401,490,000
September	197,834,000	1,742,000	68,112,000	180,298,000	352,656,000
September, '24	211,830,000	7,000	81,681,000	136,543,000	297,749,000
LUBRICANTS (Gal.)					
July	104,396,000	117,000	32,997,000	62,557,000	287,569,000
August	112,069,000	176,000	36,615,000	80,686,000	282,513,000
September	107,717,000	25,000	23,654,000	82,676,000	283,925,000
September, '24	90,228,000	2,000	24,856,000	64,244,000	243,883,000
WAX (Lbs.)					
July	46,032,000	1,922,000	26,594,000	18,802,000	112,942,000
August	47,455,000	1,338,000	25,717,000	18,934,000	117,084,000
September	46,713,000	219,000	29,256,000	26,081,000	108,679,000
September, '24	33,185,000	1,454,000	33,193,000	8,476,000	98,190,000
GAS AND FUEL OILS (Gal.)					
July	1,444,984,000	48,671,000	131,738,000	.....	†1,168,487,000
August	1,404,459,000	40,672,000	105,955,000	.....	†1,254,228,000
September	1,280,955,000	27,402,000	117,934,000	.....	†1,256,435,000
September, '24	1,113,911,000	24,160,000	145,440,000	.....	† 869,986,000

Table No. 3—Natural Gasoline Output, Demand and Stocks

AUGUST, 1925 (Amounts in gallons)	Natural-Gas Gasoline Production (net) from reports and estimated	Natural-Gas Gasoline Stocks end of month	Blended Motor Fuel Natural-gas gasoline used in blends	Blended Motor Fuel Naphtha or other oil used in blends	Stocks end of month
Appalachian	6,300,000	2,369,000	138,000	335,000	217,000
Indiana, Illinois, etc.	2,100,000	326,000	35,000	5,000	9,000
Oklahoma, Kansas, etc.	33,700,000	5,880,000	2,047,000	2,918,000	654,000
Texas	15,100,000	2,209,000	242,000	723,000	85,000
Louisiana and Arkansas	5,800,000	930,000	14,000	19,000	6,000
Rocky Mountain	3,400,000	86,000	84,000	182,000	715,000
Total east of Calif.	66,400,000	11,800,000	2,560,000	4,182,000	1,686,000
California	*25,700,000	1,077,000	not available	not available	26,000
Total United States	92,100,000	12,877,000	.....	.....	1,712,000
Daily average	2,970,000	.....	.....	.....	.....
SEPTEMBER, 1925					
Appalachian	6,400,000	2,043,000	147,000	493,000	187,000
Indiana, Illinois, etc.	1,800,000	227,000	34,000	5,000	9,000
Oklahoma, Kansas, etc.	34,200,000	5,453,000	2,380,000	4,829,000	1,088,000
Texas	15,100,000	2,205,000	260,000	936,000	155,000
Louisiana and Arkansas	5,500,000	903,000	14,000	19,000	6,000
Rocky Mountain	3,500,000	121,000	101,000	205,000	599,000
Total east of Calif.	66,500,000	10,952,000	2,936,000	6,487,000	2,044,000
California	*26,100,000	1,132,000	not available	not available	22,000
Total United States	92,600,000	12,084,000	.....	.....	2,066,000
Daily average	3,090,000	.....	.....	.....	.....

*California not estimated, returns essentially complete.

Keorsene Stocks Cut

Production of kerosene in September averaged 6,594,466 gallons daily, as compared with 6,064,000 gallons daily average in August. Domestic demand rose sharply, advancing from 4,802,258 gallons daily average in August to 6,009,933 gallons in September. Exports fell 13,500,000 gallons to 68,112,000 for the month and stocks on Sept. 30 were 352,656,000 gallons, a decline of 49,000,000 gallons during September and 91,000,000 gallons since the end of July. This decline is good evidence as to why kerosene has been so strong in the last three months.

Increased industrial activity probably accounts for the growth in lubricating oil demand in September more than greater demand for motor oils. Output fell from 3,292,550 gallons daily average in August to 3,615,100 gallons in September. Exports slumped 13,000,000 gallons to 23,654,000 for the month but stocks rose only 1,400,000 gallons.

Wax output was almost stationary but increased domestic demand and exports cut stocks 8,400,000 pounds to 108,679,000 pounds.

Gas and fuel oil stocks east of California increased 2,200,000 gallons, although production fell off 123,000,000 gallons total for September. Imports were down 13,000,000 gallons and exports increased 14,000,000 gallons.

Production Slightly Higher

Production of crude oil was approximately 6000 barrels greater on the daily average in September than in August. Small increases were made by eastern and Gulf fields. The Mid-Continent as a whole gained 2000 barrels daily average, Rocky Mountain 6000, but California fell off almost 9000 barrels on the daily average.

The biggest gain in any part of the country was in Oklahoma where daily average production jumped from 479,852

(Continued on Page 72)

Table No. 4—Oils Run to Stills at Refineries in United States During September, 1925

(Amounts in Barrels)

Districts	Crude Oils Domestic	Crude Oils Foreign	Unfinished Oils	Natural Gas Gasoline	Total Oils Run to Stills	Daily Av. Runs in Sept., 25	Daily Av. Runs in Aug., 25
East Coast	8,254,894	1,706,335	587,605	196,209	10,745,043	358,168	380,913
Appalachian	2,129,490	.....	64,224	29,793	2,223,507	74,116	77,212
Indiana, Ill., etc.	5,667,109	.....	376,141	69,920	6,113,170	203,772	207,480
Okla., Kans., etc.	8,423,207	.....	268,959	227,972	8,920,138	297,338	316,070
Texas	11,147,526	339,257	448,062	356,042	12,290,887	409,696	425,462
Louisiana and Ark.	4,771,386	847,038	245,281	44,826	5,908,531	196,951	210,667
Rocky Mountain	2,396,701	.....	845,173	87,272	3,329,146	110,971	110,037
California	16,595,154	.....	221,681*	353,488	17,170,323	572,344	590,589
U. S. Total	59,385,467	2,892,630	3,057,126	1,365,522	66,700,743	2,223,358	2,318,434
Daily average, Sept.	1,979,516	96,421	101,904	45,517	2,223,358	.....	.....
Daily average, Aug.	2,073,124	88,490	113,375	43,445	2,318,434	.....	.....
Texas Gulf Coast	8,368,775	339,257	301,856	318,632	9,328,520	310,950	320,750
La. Gulf Coast	3,501,543	847,038	219,530	.....	4,568,111	152,270	164,649

The English Take a Tip From Our Probers

CLEVELAND, Nov. 9.—"Buying petrol from the pump," states the London "Daily Mail," "is a gamble."

This conclusion was reached as a result of the experiences of A. M. Low, who is labeled a "motoring scientist" in the London newspaper, after he had visited 12 filling stations in London in an effort to test the accuracy of gasoline pumps.

Contrary to the outcome of similar investigations in this country, it was found by Mr. Low that the majority of pumps over-measured rather than short-measured. Of the 12 pumps from which he purchased gasoline, seven dispensed too much, and five gave too little.

The most inaccurate pump of the seven that over-measured, was one that dispensed almost a full pint over the gallon, while the worst offender among the short-measure pumps was one that under-delivered 90 c.c.

As a remedy, Mr. Low suggests that pumps be placed under constant supervision by the department of weights and measures, and that only such pumps should be allowed to operate which are so designed as to make "faking" impossible. Sir Philip Cunliffe-Lister, president of the board of trade in London, is endeavoring to make gasoline measuring pumps subject to examination and testing by the weights and measures department. Mr. Low, in his remarks, states, however, that he is not accusing any oil companies or garage proprietors of wrong measure, but that the fact remains that not one pump of the 12 that were tested, gave accurate measure.

Baltimore Company Opens Duckpin Season

BALTIMORE, Nov. 7.—The second duckpin rolling season of Sherwood Bros., Inc., of this city, distributor of Betholine gasoline and Rexoline motor oil, is under way. The league is made up of four teams, each named after one of the company's products. The teams are known as Rexolines, Betholines, Liberty Lights and Sherwood Straights. These teams arouse considerable interest and provide entertainment and exercise for employes, John R. Sherwood, vice president, says.

Two silver cups were offered last year by John W. Sherwood, president, one being a team cup to be given to the team winning it three years, and the other an individual cup which will be presented to the man with the highest average. The Betholines, winners last year, are therefore, one leap ahead of the others for the capture of the team cup.

WHITE SULPHUR SPRINGS, W. VA.—J. C. Burr is completing his modern drive-in service station, which will handle Texaco products exclusively.

At Booth 138-N. P. M. A. Convention

FLEXIBLE

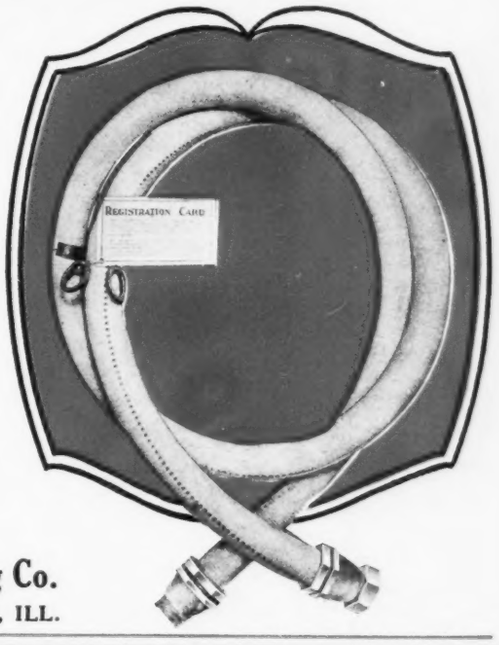
REX GASOLINE HOSE

In cold weather the flexibility of REX Gasoline hose is really appreciated. Ordinary hose gets "stiff as a board," is hard to handle, wastes time and annoys customers.

Flexibility is built right into every length of REX Hose. From the inner packing between the interlocking steel core to the outer jacket, every part contributes to flexibility—and durability.

REX Gasoline Hose is sold under a guarantee to give you absolute satisfaction. Try it—and you will always use REX.

SEE REX GASOLINE HOSE AND REX-BELL COUPLINGS AT BOOTH 138-N. P. M. A. If you are not going to attend, WRITE FOR OUR FOLDERS.



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Coupon books have many advantages over scrip, tickets or other devices.

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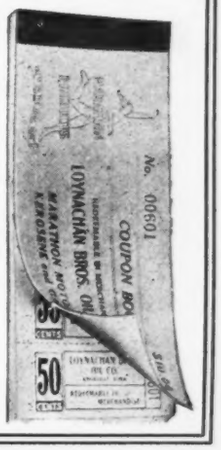
Binding is well done, in moisture-resisting covers. Press work, ink, color-register; all highly creditable.

Send for Booklet telling how to make the most money out of the coupon system.



The Arcus Ticket Company
338 N. Ashland Ave. CHICAGO, ILL.

(Continued from Page 70)

barrels in August to 516,341 barrels in September. Production in Texas outside the Gulf Coastal fields declined 8000 barrels. The decrease in California was the first fall in production there in five months. The bureau says the decline was mainly of heavy oil.

Table No. 8

Daily Average Production by States

(Amounts in Barrels)

	Sept.	Aug.
Arkansas	223,167	245,000
California	668,759	677,599
Colorado	4,533	3,032
Illinois	22,234	20,807
Indiana southwest	1,800	1,645
northwest	467	484
Kansas	112,367	115,871
Kentucky	18,760	17,968
Louisiana Gulf	7,600	8,322
rest of state	46,100	47,097
Montana	12,933	12,936
New Mexico	4,233	3,871
New York	4,767	4,710
Ohio, central-eastern	14,867	14,290
northwest	5,500	5,387
Oklahoma, Osage	76,866	76,935
rest of state	439,475	402,917
Pennsylvania	22,433	21,742
Tennessee	40	64
Texas Gulf	83,333	80,742
rest of state	290,333	298,484
West Virginia	16,200	15,387
Wyoming, Salt Creek	65,767	60,645
rest of state	21,033	21,710
Total U. S.	2,163,567	2,157,645
Classification by Gravity		
24° A.P.I. gravity and lighter	1,512,433	1,477,387
Heavier than 24°	650,634	680,258

Crude oil stocks east of California amounted to 300,981,000 barrels on Sept. 30. This represents a decline during the month of 2,000,000 barrels—the fourth successive month in which there has been a decline in these stocks. Stocks in Oklahoma, Kansas, and inland Texas declined 2,000,000 barrels, but this was partly compensated by an increase of 1,000,000 barrels in the north Louisiana-Arkansas district. In California stocks of light crude showed an increase of 1,500,000 barrels. This was the first increase in four months. Stocks of heavy crude and fuel oil in this state continued to climb, the total 78,905,000 barrels, representing an increase over August of over 3,000,000 barrels.

Table No. 9—Stock of Crude Oil

(Domestic oil unless otherwise specified, amounts in thousands of barrels)

	Sept.30 1925	Aug.31 1925	Sept.30 1924
At Refineries			
East Coast:			
Domestic	7,643	7,122	8,239
Foreign	2,258	2,370	1,774
Appalachian	1,335	1,302	1,357
Indiana-Ill.	924	1,148	1,527
Oklahoma-Kans.	4,422	4,696	5,417
Texas, Gulf Coast:			
Domestic	5,390	5,153	5,016
Foreign	580	530	855
Texas, rest of state	1,131	1,131	1,389
Louisiana Gulf Coast:			
Domestic	3,725	3,834	5,034
Foreign	1,042	1,404	1,129
Louisiana-Arkansas	716	574	263
Rocky Mountain	1,494	1,451	1,192
U.S. East of Calif.	30,660	30,715	33,192
At Tank Farms, in Pipe Lines, and Elsewhere than Refineries			
Appalachian	6,682	6,854	6,769
Kentucky	1,827	1,868	2,414
Lima-Indiana	1,100	1,097	1,227
Ill.-S. W. Ind.	10,620	10,954	11,314
Okla.-Kans.-Texas except Gulf	159,524	161,627	182,061
N. La.-Ark.	41,024	40,011	35,447
Gulf Coast	20,225	20,520	21,253
Rocky Mountain	28,580	28,548	29,810
Foreign at Atlantic	143	197	264
Foreign at Gulf	596	613	555
Total east of Calif.	270,321	272,289	291,114
California:			
20° and lighter	42,759	41,300	.....
heavier than 20°	78,905	75,659	.....
Grand Total	391,985	389,248	.....

Table No. 5—Output and Losses of Refineries During August, 1925

District	Gasoline (Gal.)	Kerosene (Gal.)	Gas and Fuel Oils (Gal.)	Lubricants (Gal.)	Wax (Lbs.)	Coke (Tons)	Asphalt (Tons)	Other finished products (Gal.)	Unfinished products (Gal.)	Losses (Bbl.)
East Coast	135,619,000	44,335,000	177,986,000	31,492,000	16,946,000	17,434	126,303	4,431,000	1,717,000	482,000
Appalachian	37,085,000	12,126,000	19,774,000	15,502,000	6,079,000	1,435	.....	1,103,000	1,346,000	121,000
Indiana, Ill. etc.	125,412,000	20,695,000	70,840,000	11,938,000	8,019,000	19,428	15,103	6,177,000	4,134,000	191,000
Okla., Kans., etc.	177,037,000	30,702,000	132,511,000	8,883,000	4,325,000	8,135	.....	2,517,000	5,710,000	347,000
Texas	180,456,000	40,331,000	216,415,000	24,006,000	4,352,000	18,894	33,014	742,000	18,891,000	561,000
Louisiana and Ark.	52,633,000	16,051,000	125,721,000	5,072,000	3,429,900	9,764	41,283	12,444,000	18,855,000	115,000
Rocky Mountain	56,398,000	9,287,000	43,671,000	2,147,000	3,563,000	9,088	3,815	110,000	19,486,000	115,000
California	141,469,000	24,307,000	494,037,000	8,682,000	.....	.....	45,169	6,167,000	27,776,000*	193,000
U. S. Total	906,109,000	197,834,000	1,280,955,000	107,717,000	46,713,000	84,178	264,637	33,691,000	97,915,000	2,125,000
Daily average Sept.	30,204,000	6,594,000	42,698,000	3,591,000	1,557,000	2,806	8,821	1,123,000	3,264,000	71,000
Daily average, Aug.	31,377,000	6,064,000	45,305,000	3,615,000	1,531,000	2,849	9,134	1,374,000	3,625,000	71,000
Texas Gulf Coast	134,797,000	31,981,000	161,035,000	22,072,000	3,990,000	16,019	33,014	9,000	10,929,000	473,000
La. Gulf Coast	42,750,000	14,236,000	95,808,000	4,993,000	3,429,000	8,641	40,696	5,958,000	12,690,000	78,000

*Includes 303,487 barrels net tops produced.

Table No. 6—Stocks of Refined Products Held at Refineries on Sept. 30, 1925

District	Gasoline (Gal.)	Kerosene (Gal.)	Gas and FuelOils (Gal.)	Lubricants (Gal.)	Wax (Lbs.)	Coke (tons)	Asphalt (tons)	Other Finished Products (Gal.)	Unfinished Oils (bbl.)
East Coast	339,807,000	66,060,000	310,174,000	102,281,000	46,408,000	26,334	74,377	7,857,000	7,510,000
Appalachian	27,911,000	11,020,000	36,496,000	35,641,000	16,292,000	1,071	80	2,592,000	994,000
Indiana, Ill. etc.	158,144,000	36,965,000	68,733,000	28,924,000	18,829,000	14,976	9,323	15,116,000	4,059,000
Okla., Kans., etc.	102,302,000	18,835,000	196,170,000	15,354,000	3,727,000	34,581	1,435	5,436,000	1,972,000
Texas	160,287,000	117,008,000	370,216,000	57,245,000	10,357,000	75,437	11,675	226,000	7,989,000
Louisiana and Ark.	188,420,000	27,522,000	207,785,000	5,106,000	4,780,000	51,076	15,411	7,892,000	2,181,000
Rocky Mountain	141,513,000	11,748,000	66,961,000	5,173,000	8,221,000	46,799	7,916	50,000	1,851,000
California	395,766,000	63,498,000	.....	34,201,000	65,000	.....	23,177	7,117,000	13,467,000*
U. S. Total Sept. 30	1,514,150,000	352,656,000	1,256,435,000	283,925,000	108,679,000	250,274	143,394	46,286,000	40,023,000
U. S. Total Aug. 31	1,540,716,000	401,490,000	1,254,228,000	283,513,000	117,086,000	222,461	151,010	50,575,000	40,092,000
Texas Gulf Coast	137,648,000	108,184,000	301,210,000	55,604,000	10,229,000	73,754	11,675	44,000	7,421,000
La. Gulf Coast	184,916,000	26,493,000	185,866,000	4,724,000	4,780,000	47,991	15,168	2,302,000	1,837,000

*Includes 6,461,000 barrels tops in storage.

Table No. 7—Production, Imports, Exports and Domestic Deliveries of Crude

(Amount in Barrels)

Fields	Sept. Daily Average Production	Aug. Daily Average Production	Total Production 1st 9 mos. of 1925	Total Production 1st 9 mos. of 1924	Sept. Daily Average Deliveries	Aug. Daily Average Deliveries	Total Deliveries 1st 9 mos. of 1925	Total Deliveries 1st 9 mos. of 1924
Appalachian	77,067	74,161	20,532,000	20,395,000	84,167	75,871	21,309,000	20,430,000
Lima-Indiana	5,967	5,871	1,639,000	1,768,000	5,867	6,806	1,760,000	1,519,000
Illinois-S. W. Indiana	24,033	22,452	6,396,000	6,644,000	35,166	20,258	6,646,000	6,420,000
Mid-Continent	1,188,308	1,186,304	319,327,000	280,669,000	1,224,633	1,232,032	329,337,000	266,710,000
Gulf Coast	90,933	89,064	23,592,000	21,472,000	100,767	97,807	23,567,000	24,467,000
Rocky Mountain	108,500	102,194	26,024,000	34,697,000	107,433	102,968	26,116,000	24,755,000
California	668,759	677,599	171,787,000	173,611,000	518,600	563,710	.....	.....
Total Domestic	2,163,567	2,157,647	569,297,000	539,256,000	2,076,633	2,082,839	*408,735,000	*344,301,000
Imports	134,233	130,484	48,387,000	60,413,000	.....	.....	.....	.....
Deliveries of Foreign Crude	.....	.....	.....	.....	135,534	133,291	48,201,000	60,689,000
Exports	.....	.....	.....	.....	30,734	47,253	10,446,000	14,118,000
Total New Supply	2,297,800	2,288,131	617,684,000	599,669,000	†	†	†	†

*Exclusive of California. †Total indicated consumption figures not available because of inclusion of exports in California deliveries figures.

The Right of the State to Compete with Private Enterprise

By Andrew A. Bruce
Professor of Law, Northwestern University, Chicago

THIS paper by Prof. Bruce, who was chief justice of the Supreme Court of North Dakota before he went to Northwestern university as professor of law, was read before the American Oil Men's Association in Chicago before the Supreme Court of South Dakota decided against that state in its gasoline and oil retailing business. The paper attracted a great deal of interest at Chicago, when it was read. Although the decision in the South Dakota case varies from what Prof. Bruce evidently suspected would be the decision, the paper gives oil men an idea of what they may expect of the courts in actions attacking state owned enterprises.

TIME and again the Supreme Court of the United States has refused to pass upon the question of the wisdom or unwisdom of state legislation and in considering the constitutionality of statutes has concerned itself with the question of power and of power alone. Generally speaking, we and the states of which we are citizens have been accorded the privilege of making our own mistakes and there are no constitutional provisions and there is no power which is vested in the Supreme Court of the United States which can prevent us from making fools of ourselves if we only choose to do so. As far as the federal courts are concerned therefore our states may go into the oil business if they choose to do so and are willing to take the consequences, and they may, if they desire, experiment in many other fields of state socialism.

There are only three or four clauses of the federal constitution which can possibly stand in the way of any of these oil activities and the Supreme Court of the United States seems, in similar cases at any rate, to have held that they are not prohibitive. The first and foremost of these provisions is that clause of the fourteenth amendment which provides that "no state shall deprive any person of life, liberty, or property without due process of law," and I think that everyone will admit that, if a state oil venture requires the expenditure of state money and if the oil business is not to be considered as a legitimate state enterprise, the taxpayer can complain when he is required to pay taxes in order that such money may be raised and that a levy for the purpose would deprive him of property without due process of law.

Hard to Get Hearing

How he can get into court and get a hearing, however, is another question. It is one thing to complain and it is another thing to get anybody to listen to you. Taxes, indeed, are so necessary for the support of every state and a full treasury so necessary to every officeholder that the courts have been very hesitant in restricting their imposition or collection. "Every presumption," said the Supreme Court of the United States in the North Dakota case of Green vs. Frazier, "is indulged in favor of the exercise by a state of its taxing power when attacked as taking property without due process of law and only clear and demonstrated usurpation of power will authorize judicial interference.

"When the people, the legislature, and the highest court of the state have united in declaring that the purpose for which money is being raised by taxation is of a public nature, the Supreme Court will not interfere unless it is clear beyond reasonable controversy that rights secured by the federal constitution have been violated." But not only is this the case but the federal courts seem to have denied to the citizen of a state the right as an individual to object altogether, at any rate until his property is sought to be sold for the non-payment of the tax and which would be so late and so rarely occur that the state could finance a temporary oil business and put the oil men out of business with the aid of the funds generally collected long before the individual protest could be heard.

But even if the question can be raised, and in the prior case of Green vs. Frazier, the Supreme Court of the state of North Dakota allowed it to be raised and the Supreme Court of the United States recognized the jurisdiction, this very case, Green vs. Frazier, stands in the way of the oil man. The decision involved the economic and socialistic program of the so-called Non-Partisan league of North Dakota and the right of the state to enter into the domain of industry and to raise taxes both for the purpose of making it possible for its citizens to monopolize and to sell their goods and agriculture products at an increased price and to purchase goods and to borrow money at a reduction from the prevalent rates.

In it was contested the validity of state bonds which were issue for the purpose of raising money to build terminal elevators and state-owned mills, creameries, cheese factories, and cold storage warehouses in which the farmers might store and pool their products and thus control the price, and a state-owned band and a co-operative store and a home-building association scheme by which it was sought to make it possible for a farmer to borrow money at a low rate of interest and to buy goods and to build at reduced prices.

In the North Dakota case, the same arguments were put forth by the taxpayers that are being urged today by the private oil men. They protested that the function of the state was to govern and not to engage in industry and that it was not fair to tax the private grain dealer or the private store keeper or the private butter maker or the private miller or the private banker for the general state revenue and then to subject him to the competition of state-owned industries.

Constitutional Guarantees

There are, of course other constitutional provisions which were at one time thought to be involved. The first is the provision that "Congress shall guarantee to the several states a republican form of government" and for a long time there seems to have been a strange faith on the part of business men that the federal courts would afford them any relief they were entitled to, that they were their guardians against all kinds of foolish legislation, and that a republican form of government meant a government under which state business competition was prohibited. It is clear however, as the Supreme Court of the United States has repeatedly held, that this provision relates merely to the method of choosing those who shall govern, that it is a guarantee against a monarchical form of government and has nothing to do with the question what a legally organized state may do and may not do.

Another provision is the one which prohibits a state from impairing the obligations of a contract. But though this provision has done much to bring about business stability in America it can hardly help the oil in the present contingency. In the famous Dartmouth college case, the Supreme Court of the United States held that the charter of a corporation was a contract and could not be arbitrarily set aside or amended. The decision made business investment safe in America. When the investor invested in corporation stock, he knew that the life and the freedom of that corporation were assured.

I may also add that prior to the decision of the North Dakota case of

Green vs. Frazier, the Supreme Court of the United States in the case of Jones vs. The City of Portland had sustained the validity of an act of the state of Maine which had authorized its cities and towns to establish and maintain wood, coal and fuel yards for the purpose of selling these necessaries to their inhabitants and had held that the act did not deprive the taxpayers, even though they happened to be men engaged in the fuel industry, of property without due process of law.

This case, indeed, and the North Dakota case, before mentioned, both held that the act did not deprive the taxpayers, even though they happened to be men engaged in the fuel industry, of property without due process of law.

This case, indeed, and the North Dakota case, before mentioned, both held that taxation could be levied for the purposes of and that the state itself could enter into the domain of competition and that the necessity and wisdom of its interference was for the state legislature and the state courts to determine.

The courts then will not help us and I say "us" because, though I am not an oil man, I believe that the entry of the state into the oil business will, in the long run, be detrimental both to the producer and to the consumer and that the more the state keeps out of the business field and confines itself to its legitimate function of protecting life and liberty and property, the better for all of us. Perhaps, however, it is well that these decisions have been handed down for they place the responsibility upon ourselves and upon our legislatures and put a stop, as far as these matters are concerned, to the great American industry of "passing the buck" to the courts.

Responsibility Dodged

In the past our legislators have constantly dodged responsibility. They have been looking for votes and, in order to gain popularity with the aggressive classes of their constituents and in order to log-roll their own measures, they have frequently voted for statutes which they considered unwise and even unconstitutional, and they have justified themselves to their critics by saying that when the bills were tested in the courts they would be declared invalid and the public would be safe from harm. Now as far as state socialism is concerned, the legislator must face the music, and we must get public sentiment to bear upon him, and we must educate that sentiment.

What we need in all of these matters is a widespread campaign of public education. The problem of democracy is the problem of the dissemination of the truth. We have given the ballot to everyone. Our government is essentially a government of the majority. In a large measure, whether we protect life, or liberty, or property at all is for that majority to decide.

Even constitutional guarantees of liberty may be amended or annulled by popular action. In some states it requires a year or two to do this and this is true of the federal constitution. But in others, under the initiative method it may be done in a few months. The Non-Partisan measure of North Dakota, for instance, made it possible to amend or to set aside the constitution by an initiative process which was started by a petition in August and voted upon in November. We do not realize what this means. Our constitutions and our whole system of American Government were the result not of years but of centuries and in them is reflected the experience of the ages. Back of them, and back of all the liberty and opportunity that we now enjoy, back of our religious freedom, is not merely Bunker Hill and Lexington but the experience and the martyrdom of the ages and the experience and martyrdom of every nation and of every clime.

Gladstone no doubt said that the American constitution was the most wonderful document that was ever struck off by the hand of man at one time. But he didn't say that it was the creation of one time. He didn't say that the framers of that document did not profit by the experience of the centuries that had gone before. Yet, according to the North Dakota initiative system, one of these constitutions which it took centuries to formulate and to create may be swept aside by the vote of a people after the deliberation of only three months and those three months the harvest months in which the voters are all busily engaged, and have no time for political thoughts.

It is an ill wind that blows nobody any good. And if the oil man's difficulties do not result in anything else I fervently hope that they will result in making him take note of the dangers that are before our democracy and of the necessity of a more general economic and legal education. I hope it will serve to call his attention to the dangers of our primary election system. Formerly a candidate for a public office had to have the support of a convention and to stand for a platform of which that convention approved. Usually the party leaders were level headed and the platform was reasonable. The candidate had the party behind him and did not have to make his own campaign.

Make Radical Platform

Now, every candidate has to stand on his own bottom and under the primary election system any fool may be a candidate. It is a question of each man for himself and the devil take the hindmost. There is no general platform and each primary election candidate in order to attract attention, seeks a lurid platform of his own. The more startling this platform, the better. The unthinking populace for the moment is always gullible, and if he promises to make gold out of green cheese it will believe him and vote for him, if elected and he goes to the legislature, his term is only for one session and if he would be re-elected he must face the primaries again.

He wants to go before his constituents at that primary with some vote-getting ammunition. He wants to show that he is a man of the people and that he did something at the legislative session. He therefore ransacks the literature of radicalism for some idea which he may put in the form of law and label as his own. The solid paths of legislation do not interest him. If you do not believe me, examine the bills that are introduced into any legislature and you will find it true.

Business Man Asleep

In the past, the American business man has slept at his post. Our papers have discussed murders and suicides when they should have discussed great economic facts. Democracy is in the saddle. Democracy can do in a large measure what it pleases. The problem of America is to make that democracy economically intelligent. There is such a thing as a thoughtless democracy and such a thing as a thoughtful democracy.

Why did the Non-Partisan League carry North Dakota? Simply because of the power of the lie and of the half-truth. On the platform, at farmers' picnics, in their newspapers which they sent to every farmer in the state, they decried existing conditions, vilified the conservatives, and misquoted judicial decisions. There was none to answer them and the farmers believed them for the newspapers avoided economics and printed news of murders, of suicides, and of divorces. If democracy will survive, it must know the truth and be prepared to weigh economic questions on their merits and if it knows the truth the truth will keep it free.

I believe the state entry into the oil business, in fact into every other kind of business, will not only as a rule destroy legitimate business but will be ruinous to the taxpayers themselves. Everyone of the Non-Partisan socialistic enterprises in North Dakota failed and they failed simply because business and politics are always poor bed-fellows. It is true that the mill at Grand Forks is still running. But it is running merely because the state is paying the interest on its bonds out of the principal.

In politics we choose our candidates and elect them not because they are good business men but because they are good fellows and are popular or because they have the money to pay for newspaper advertising. A primary is a poor place to sift business talent. The first president of the state mill at Grand Forks was a competent man but politics soon removed him and the mill is running behind every day. The first president of the bank possessed the sole qualification that he was a good fellow and that he had been a livery-stable keeper. He did not know a bank draft from a buffalo calf. Of course, the bank failed.

To attempt to cut your price to meet the man with a tank on the edge of the town is absolute folly, but it is equally foolish to try to think that you can do away with such competition.

The man with the tank on the edge of town will survive, because he is working on sound economic principles. He can sell at a lower price than you, because his costs are lower. But that does not mean that you have to sell at a loss, or go out of business. You can get your price because you give more for your price. Therefore, instead of cutting prices and discounting the advantages you do have—hold to the price that makes your profit, and sell the advantages you have for what they are worth. The man who says this can't be done, doesn't know his eggs. It is being done every day in all other lines of business.

The oil man who operates on a price basis alone, who believes that he must cut prices or get out of business, when the other people cut prices, is blind to the contradictory evidence he may see on every side of him.

The same thing can be done in the oil business, when each oil man sells the type of service he offers at its full advantage, instead of trying to meet a totally different type of economic competition, through price cutting that has no relation to cost.

SANE Thinking Will Bring Sane Merchandising

As we have repeated again and again, it is high time for the Independent Oil Men to do collective, constructive thinking.

The best way for each to do this is through co-operating earnestly and sanely with his State, as well as with the National Association.

The province of both the State and the National Association is through the assimilation of the thoughts of each member to energize our branch of the industry on sound merchandising lines. The man who thinks of the association as a *Cats Paw* to pull his own chestnuts out of the fire, has the wrong idea. So too, has the man who believes that the association whether it be State or National should concern itself with trying to fight competition that is economically sound. What concerns us is to deal with fundamentals of our own business—instead of trying to repair an economically unsound structure. We must plan constructively to survive and succeed because we make ourself economically fitted to survive and succeed!

We must bear in mind that our competition that is built right fundamentally will succeed. That our danger lies not from sound competition but rather from meeting unsound, uneconomical competition, by descending to employ the same practices ourselves.

Big Questions Will Be Decided At Louisville

Bring all the competitive problems that are facing you to Louisville. We are going to have a meeting there that will throw the searchlight of truth on the whole situation and plan our procedure definitely.

Every Independent Oil Man should have a thought worth contributing to that meeting, and every one who is there cannot fail to receive definite decisive help, that will be reflected in his profits next year.

The possible advantages and disadvantages of owning our own cracking and refining plants, the economic leverage of collective buying and the results of a definite investment in public good will, will be discussed at this meeting.

Remember this is a business meeting pure and simple—for business men. If you are interested in your business it will be to your interest to be with us and plan with us.

NATIONAL PETROLEUM MARKETERS ASSOCIATION

624 South Michigan Avenue, Chicago, Illinois

(This is the fourth of a series of advertisements approved and paid for by the Board of Directors of the National Petroleum Marketers Association.)

Application for membership

.....1925

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624 So. Michigan Avenue, Chicago, Illinois

The undersigned hereby applies for membership in the National Petroleum Marketers Association, including a subscription to the Confidential and Personal Weekly Letter and Market Review, and attaches check for $25.00 covering first year's dues.

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QUALITY TOKHEIM

Complete Utilization of Coal and The Motor Fuel Supply

By A. C. Fieldner and R. L. Brown

Chief Chemist, Bureau of Mines, and Organic Chemist, Bureau of Mines, Pittsburgh Experiment Station

SINCE the Federal Oil Board at Washington, through its questionnaires to the oil industry, has projected considerable thought by the industry to the matter of future reserves and substitutes for petroleum, the accompanying article on possibilities of motor fuel manufacture from more complete utilization of coal should be of considerable interest to oil men generally.

The authors, Dr. A. C. Fieldner, chief chemist of the Bureau of Mines at Pittsburgh, and Dr. R. L. Brown, organic chemist at the same experimental station, do not attempt to give any figures as to the future volume of gasoline substitutes available from coal.

They take up recent developments in the liquefaction and gasification of coal and show what quantities of motor fuel substitute are possible per ton of coal treated, and discuss briefly some economic phases of the practical manufacture and distribution of such products.

This joint study was read by Dr. Fieldner at the recent meeting in New York of the American Chemical Society. It is published with the permission of the Director, U. S. Bureau of Mines.

M. R. Campbell of the U. S. Geological Survey estimates the unmined coal of the United States existing within 3000 feet of the surface at 3½ trillion short tons. This amount of coal is enough to cover the entire state of Ohio (area 41,040 square miles) to a depth of about 76 feet. "Similarly, if all the coal that has been mined in the United States, plus about 40 per cent for waste, a total of 17,119,010,000 tons, were piled to a height of 76 feet, it would cover a square a little more than 14 miles on either side; in other words, the exhaustion up to the end of 1918 amounted to only about one-half of 1 per cent of the original total supply."[4]

There seems no doubt but that most of this great mass of coal, constituting over 60 per cent of the world's reserve will still be in the ground when all the petroleum available by drilling and pumping methods become exhausted in the United States. For the United States, coal is the logical source of liquid fuel substitutes for petroleum gasoline.

Shale Oil and Alcohol

It is recognized that shale oil and alcohol from vegetable matter will contribute considerable quantities of fuel, but they can not carry the bulk of the load if we are to continue using anything like the amount of gasoline consumed today.

The average oil shale yields little if any greater quantity of distillate per ton than may be obtained by the low temperature distillation of bituminous coal, and coal has the big economic advantage of being mined near the centers of population and in furnishing a residue that can be sold as a relatively high priced smokeless domestic fuel. Most of our shale is found in the sparsely populated western states and the residue is worthless.

The amount of alcohol that can be obtained from the fermentation industries is also limited. The diversion of any considerable acreage to growing vegetables or grain for motor fuel would cut too deeply into our food supply to be tolerated.

A Demand for Motor Fuel Substitutes Will Stimulate More Complete Utilization of Coal

We must admit that the present day utilization of coal is far from complete. Much progress has been made in certain lines but the fires of the bee-hive coke-oven can yet be seen by the traveler between Pittsburgh and New York. The combustion of raw coal and the transmission of the heat to the boiler in our most modern central power stations have indeed almost reached perfection. 86 to 90 per cent thermal efficiency is now being obtained in regular operation in the best powdered coal fired plants. Much gain in this direction is not possible.

However, the great manufactured gas industry and the coking industry are just beginning to see the future possibilities in processing coal to produce fuels of higher form-value and other by-products. The gradual failure of the yearly output of petroleum to meet the increasing needs of the automotive industries, with the consequent rise in prices of motor fuel should stimulate the carbonization of coal by both high and low temperature processes.

The automobile may yet help to bring about, to no small degree, that desired millenium when the atmosphere of Pittsburgh will be as free from smoke as when George Washington first beheld the beautiful valley of the Monongahela river. This ultimate aim can be accomplished by processing all coal, except perhaps inferior grades, by carbonization processes yielding gaseous, liquid and smokeless solid fuel. Inferior grades may be burned directly in great super power stations, which produce very little smoke. Let us evaluate the present day practical and future theoretical possibilities for obtaining motor fuel from coal.

Processes for Obtaining Motor Fuel From Coal

The processes for obtaining motor fuel from coal may be grouped in three classes:

(1) The carbonization of coal, including the gas manufacturing and coking industry, and low temperature carbonization.

(2) The hydrogenation of coal by the Bergius process.

(3) The complete gasification of coal and conversion of the resulting gases by pressure synthesis into methanol, "synthol," and other liquid combustibles.

Of these processes only the high temperature carbonization process is in actual commercial use, if we except the distillation of brown coal in Germany which is done at low temperature.

A number of large scale low temperature experimental units still in a development stage are operating intermittently in both this country and abroad. The principal object in most of these experiments is the production of a convenient form of smokeless solid fuel. Any considerable increase in the price of liquid fuel would probably make some of these low temperature processes commercially successful.

The partial liquefaction of coal by hydrogen under pressure according to the Bergius method has been under laboratory investigation in a number of European laboratories, and one of us saw a 2-ton per day unit operated by Dr. Bergius at Rheinau near Mannheim, Germany, 12 months ago.

A recent Berlin report in the New York Commercial of Sept. 9 states that "A credit of 2½ million marks ($600,000) has been allotted jointly by the German government and the Prussian government to the Evag. Co. toward erecting a factory for producing oils from coal under the so-called Bergius process. This is being erected at the Wenceslaus mine in Lower Silesia. It

[4]Campbell, M. R., The Coal Fields of the United States: Professional paper 100-A, U. S. Geological Survey, 1922, p. 25.

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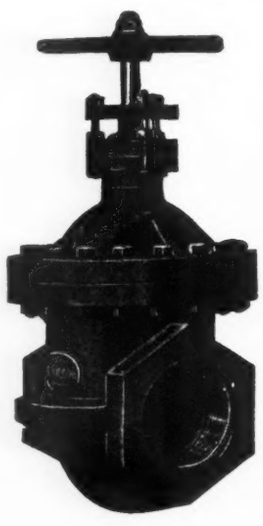

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will have a capacity for treating 200,000 tons of coal dust a year." If this report is true, we should have full information on the commercial possibilities of this process long before it is needed to augment our own gasoline supply.

The commercial production of methanol in Germany from carbon monoxide and hydrogen is an assured fact as witnessed by the methanol importations in the port of New York during the present year. Disturbing as this may be to our own wood distillation industry, it unquestionably puts an entirely new aspect on the ultimate gasoline substitute for motor fuel. Even though pure methanol is an untried motor fuel, the fact that it can now be synthesized on a large scale at a reasonable price opens up a new field of possibilities in which are included the synthesis of other combustible liquids such as Franz Fischer's "Synthol" from water gas,[5] on which he reported at the Baltimore meeting of the American Chemical Society last April.

The future economic significance of Bergius and the synthetic processes will become apparent as we discuss in more detail the yields and the possible total production by carbonizating coal wherein the motor fuel is a by-product. The total quantity of any by-product is necessarily determined by the market demand for the main product.

Motor Benzol From Coke and Gas Works

In the modern by-product coke-oven a ton of coal yields from three to four gallons of crude light oil of which 60 to 70 per cent after proper refining may be utilized as motor fuel. During 1923, the latest year for which the data are complete and given by the U. S. Geological Survey,[6] the total coal coked was 55½ million short tons of which two-thirds was made in by-product ovens.

The light oil recovered was 135 millon gallons of which 95 millions would have been suitable for motor fuel. This figure is approximately 1¼ per cent of our gasoline requirement of 7600 million gallons for 1924. If all the coal carbonized in 1923 were put through by-product ovens, the yield would not exceed 2 per cent of these requirements, and finally if the entire 1923 output of 545 and one-half million tons of bituminous coal were subjected to the by-product coking process, it would furnish only 1335 million gallons, or about 18 per cent of the gasoline used in 1924. Obviously, the ultimate production of benzol possible can only serve to furnish a limited amount of blending agent for gasoline-alcohol mixtures.

Ethyl Alcohol From Coal Gas

In this connection, there is a possibility of virtually doubling the quantity of motor fuel from the carbonization of coal through the conversion of ethylene in coal gas into ethyl alcohol. Bury,[7] at the Skinningrove Iron Works in England, obtained an average yield of 1.6 gallons of alcohol per ton of coal carbonized in by-product ovens in a small experimental plant. Sulfuric acid was used as the absorbing medium to form ethyl sulfuric acid which on hydrolysis yielded ethyl alcohol.

Although the English experiments were not commercially successful, Vallete[8] has recently reported that a similar process is to be installed in connection with a Claude plant for the manufacture of synthetic ammonia from by-product coke oven gas at the Bethune mines in France.

The ethylene is to be separated through compression and refrigeration, from the other constituents of the coal gas. The cost is stated to compare favorably with that of distillery alcohol.

Should this process eventually prove technically successful, it would afford a means of adding 65 per cent more to the motor fuel per ton of coal carbonized, which would be but 3.3 per cent of the 1924 gasoline consumption if all the coal carbonized during the year were so treated, or 30 per cent for all the coal mined. The most optimistic estimate of expansion in the use of gas and coke would put the total motor fuel to be had from this source nearer the 3.3 per cent figure than the 30 per cent.

Motor Fuel From the Low Temperature Distillation of Coal

Let us now turn our attention from the prevailing method of the coke and gas industry to the field of low temperature carbonization which according to many writers affords a means of replacing our petroleum resources. It is an established fact that the low temperature distillation of coal yields from two to two and a half times as much tar per ton as high temperature carbonization.

Carefully conducted large scale tests by the Fuel Research Station in England[9] gave 1.4 gallons of light oil distilled from the tar and 1.6 gallons scrubbed from the gas—a total of 3 gallons per ton of coal. Fischer and Gluud in Germany obtained 2.0 to 3.8 gallons, and Davis and Parry[10] of the Bureau of Mines obtained 4.5 gallons of light oil suitable for motor fuel from the low temperature distillation of a Pittsburgh district coal on a laboratory scale. These yields are of the same order as the benzol yields of high temperature carbonization. However, they can be augmented by the pressure cracking of the low temperature tars as shown by Morrell and Egloff,[11] who report a yield of 17 per cent of the total tar converted into oil distilling below 230° C. Assuming an average yield of 25 gallons of tar, this would mean 4.25 gallons of motor fuel per ton of coal or a total of 6 gallons including that scrubbed from the gas.

Low temperature coke is not suitable for metallurgical purposes, hence the development of this industry will not reduce the amount of high temperature coke made. Its logical field is in the processing of our poorly coking and non-coking coals and lignites for the production of smokeless solid fuel. It is reasonable to expect in the relatively near future that 100 million tons of bituminous coal, an amount equal to the annual anthracite production will be carbonized at low temperatures. This amount would yield 600 million gallons of motor fuel, or about 8 per cent of the 1924 gasoline requirement. Another reasonable expectation is that super power stations will carbonize coal at low temperature, and generate steam from the pulverized residue. The 60 million tons[12] of coal burned in central power plants would thus provide 360 million gallons of motor fuel which added to the yield from plants making domestic fuel would furnish a total of 960 million gallons, or 13 per cent of the annual requirement. Thus it is evident that the maximum possible development of low temperature carbonization can not serve to furnish more than 20 to 30 per cent of the annual requirements, based on present day consumption. We must turn to processes in which motor fuel is one of the principal products rather than a minor by-product.

Motor Fuel From Bergius Process of Liquefying Coal

Of these the Bergius process deserves serious consideration since it converts from 25 to 50 per cent of the coal into tar and oils, the yield varying with the type of coal and the conditions of hydrogenation. In this process, pulverized coal mixed with oil or tar to form a thick paste is heated at 400 to 450° C. in an atmosphere of hydrogen under a pressure of 150 to 200 atmospheres of hydrogen. Under these conditions the coal is converted into a black, tarry liquid which, on distillation up to 300° C., yields oils and tar to the extent of 20 to 40 per cent, according to various reports. No reliable information is available on exact yields or what proportion of this tar can be refined into motor fuel distilling under 150° C. Kling[13] reports 15 per cent. One of us who visited the plant at Rheinau a year ago was told that 20 per cent of the coal was converted into neutral oils boiling below 230° C. to 10 to 15 per cent below 200° C. On the basis of a 230° C. end point gasoline, 1 ton of coal would yield 50 gallons. It is claimed that retreatment of the heavier oil in-

[5]Fischer, Franz, Liquid Fuels from Water Gas, Ind. & Eng. Chem., vol. 17, No. 6, June, 1925, pp. 574-76.

[6]Mineral resources for 1923.

[7]Bury, E., Alcohol from ethylene from coal gas; Gas Jour. 148, 718; Gas World 73, 123; Gas Jour. 151, 449.

[8]Vallete, Commercial manufacture of synthetic alcohol; Chimie et Industrie, 13, (1925), pp. 718-21.

[9]Fuel Research Board Report for the years 1920-21, Second Section; Low Temperature Carbonization (H. M. Stationery Office).

[10]Carnegie Institute of Technology Bull. 8, 1924.

[11]C. A. p. 1770; 2407 (1925).

[12]Power, Jan. 6, 1925, pp. 2 and 20.

[13]Kling, M. Andre, Liquid Combustibles from the Bergius Process, Chaleur et Industrie, Special Number, Dec. 1924, pp. 53-71.

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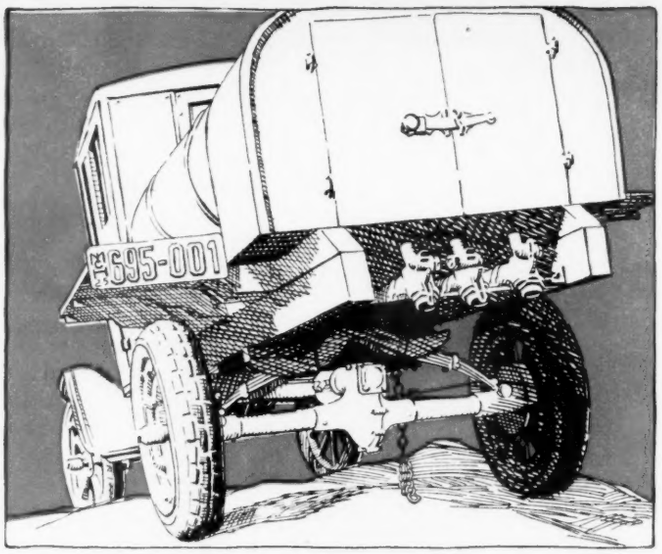

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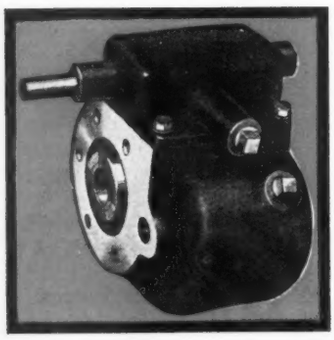

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creases the yield of lower boiling constituents.

Other investigators, notably Shatwell and Graham[14] in England, and Fischer and Frey[15] in Germany, have confirmed the essential facts of the Bergius process. Fischer and Frey working at 75-100 atmospheres at 425-450° C. converted semi-coke from brown coal into oils and gas in 45.2 per cent and 30 per cent yields respectively.

We may therefore regard the Bergius process as one of the possible future methods for making a petroleum substitute from coal. But it must be emphasized that in this process, a gasoline substitute is only one of the products, the gasoline being in about the same proportion as in a light crude petroleum. From the standpoint of motor fuel production, the direct synthesis from gases seems more economical.

Synthetic Motor Fuel from Gases

The investigations of Patart[16] and Audibert[17] in France, and of Fischer[18] and the Badische Anilin and Soda-Fabriken in Germany together with the production of methanol from carbon monoxide and hydrogen on a commercial scale by the latter has put a totally new outlook on the entire subject of our future motor fuel supply.

In this process, pure methanol is produced from two volumes of hydrogen to one of carbon monoxide when subjected to pressures of 150 to 250 atmospheres and temperatures of from 300 to 425° C. in a copper lined reaction chamber, containing one or more of a number of catalysts which include since oxide or oxides of chromium, vanadium, manganese, tungsten, uranium, lead and bismuth. The cost reported from both French[19] and German[20] sources varies from 18 to 27 cents per gallon. About 18 per cent of the heat value of the constituent gases is consumed in the conversion. There are no by-products. On a volume basis, the net or low heating value of pure methyl alcohol is about 60 per cent of that of gasoline.

Ricardo[21] has shown that the indicated thermal efficiency at the highest useful compression for methyl alcohol is 35.0 per cent as compared to 31.4 per cent for gasoline at its highest compression—the compression ratios being 5.2 for methyl alcohol and 5.0 for gasoline. It should therefore require 1.5 to 1.6 gallons of methyl alcohol to be the fuel equivalent of 1 gallon of gasoline. One ton of coke should yield 350 gallons of methyl alcohol.

However, we need not confine ourselves to methanol, the experiments of Franz Fischer[22], Director of the Institute for Coal Research at Mulheim-Ruhr, show that fuel mixtures of higher heating value can also be synthesized from carbon monoxide and hydrogen. Fischer and his associates have produced on a laboratory scale from water gas a mixture which they term "synthol" that consists of a mixture of alcohols, aldehydes and ketones with small quantities of hydrocarbons.

Water gas plus hydrogen is subjected to a pressure of from 75 to 150 atmospheres at 400 to 425° C. in a steel reaction chamber containing a catalyst prepared from iron and a solution of sodium carbonate and consisting presumably of sodium ferrite.

By-products of this reaction are carbon dioxide, methane and water. By recirculation of the gases, about 1/3 of the original water gas is converted into liquid products, having a distillation range similar to gasoline, and a heating value of 8200 calories per kilogram. This process is yet in its early laboratory stages, but it indicates that further developments along this line may be expected, especially since other laboratories both in the United States and abroad are taking up research in this field.

Economic Relationship of Motor Fuel Synthesis from Gas to Other Industries

Assuming the feasibility and the development of synthetic motor fuel from gases, and granting that the day of universal use of composite fuels is coming, let us consider where these processes will fit into our present and future industries. Will the petroleum or the gas and coke industry be in the better economic position to make synthetic fuel?

The Petroleum Industry and Synthetic Fuel

Since the waning of petroleum gasoline will be a gradual process, it would seem logical for the large petroleum refiners to install synthetic processes to augment their gasoline supply just as some of the natural gas companies are now adding water gas to their natural gas to make up the required volume.

The large refineries have the organization, financial resources, and the distributing systems to market the fuel. The methanol and synthol processes are peculiarly adapted to this purpose since the entire product can be converted into motor fuel.

The Manufactured Gas Industry and Motor Fuel

However, the petroleum industry is likely to have strong competition from the manufactured gas industry which has an inherent economic advantage in that they are engaged in the manufacture of water gas, the raw material for methanol and "synthol."

The summer months when the need for motor fuel is greatest the period when gas plants have much idle capacity which must be maintained to carry the peak loads of the winter season. The addition of synthetic motor fuel units would serve to give an even load and at the same time permit the unhampered development of domestic house heating, which at the present time is increasing the top-heavy winter loads.

The gas utility companies also have natural advantages in selecting the most economic process for providing the necessary constitutent gases and in disposing of residual gases from the process. For example, in making methanol, they can manufacture the coke for making the water gas in by-product ovens, separate the requisite extra volume of hydrogen from the coke oven gas, and use the remaining high B. t. u. rich-in-methane gas for enriching water gas for city distribution. Such enrichment will be needed to take the place of the present day oil carburetion. The ethylene can also be converted to ethyl alcohol which, with the benzol from the coke ovens, can be mixed with the methanol for motor fuel.

Should the synthol process prove more economic, the gas utility will again be in the best position to utilize the residual methane for enrichment purposes.

The public utilities distributed in 1924 some 500 billion cubic feet of manufactured gas, of which 74 per cent was carburetted water gas. The estimated annual idle capacity of these water gas plants is 350 billion cubic feet.[23] This amount of gas will produce 1500 million gallons of methanol or 300 million gallons of the mixture "synthol." Fifteen hundred million gallons of methanol is 13 per cent of the 1924 gasoline consumption. The inevitable growth of the gas industry will provide a much larger capacity and the expansion required to take care of the entire demand is a distinctly practical possibility.

Conclusion

Before concluding this review of the relation of the complete utilization of coal to motor fuel, we wish to state that our discussion has been confined solely to liquid substitutes from coal for petroleum gasoline that can be used in essentially similar internal combustion engines. We recognize that Diesel type engines using heavier oils, gas producers using coke and semi-coke, and even compressed gas engines may be used, especially on trucks. But the most promising solution of the motor fuel problem of the distant future is in synthesis from coal gas and water gas, since there are no inherent quantity limitations imposed by the market for other products.

We do not mean to say that any large amount of substitute will be needed for gasoline in the near future. We may need some substitutes in 5 years, or it may be 25 years. However, we know the time for research is here.

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[14]Shatwell, H. G., and Graham, J. Ivon, The hydrogenation and liquefaction of coal; Fuel in Science and Practice, vol. 4, pp. 25, 75, 127.

[15]Brennstoff-Chemie 6, 69-79 (1925) C. A. 19, 1768.

[16]Patart, Georges, A new field of catalysis under high pressure; Commercial synthesis of methanol; Chimie et Industie 13, pp. 179-85 (1925).

[17]Audibert, Etienne, The manufacture of synthetic liquid fuels from mixtures of carbon and hydrogen; Chimie et Industrie 13, pp. 186-94 (1925).

[18]Fischer, Franz, and Tropsch, Hans, Uber die Herstellung von Synthol durch Aufban aus Kohlenoxyd und Wasserstoff; Brennstoff-Chemie 4, 193; and 5, 201, 217.

[19]Patart, loc. cit.

[20]Elworth, R. T., Canadian Chem. Met. 9, 139 (125).

[21]Report of the Empire Motor Fuels Committee; the Inst. of Automobile Engineers, vol. 18, part 1, (1923-24) p. 144.

[22]Fischer, Franz, Liquid fuels from water gas; Ind. & Eng. Chem., vol. 17, p. 574 (1925).

[23]Personal estimate.

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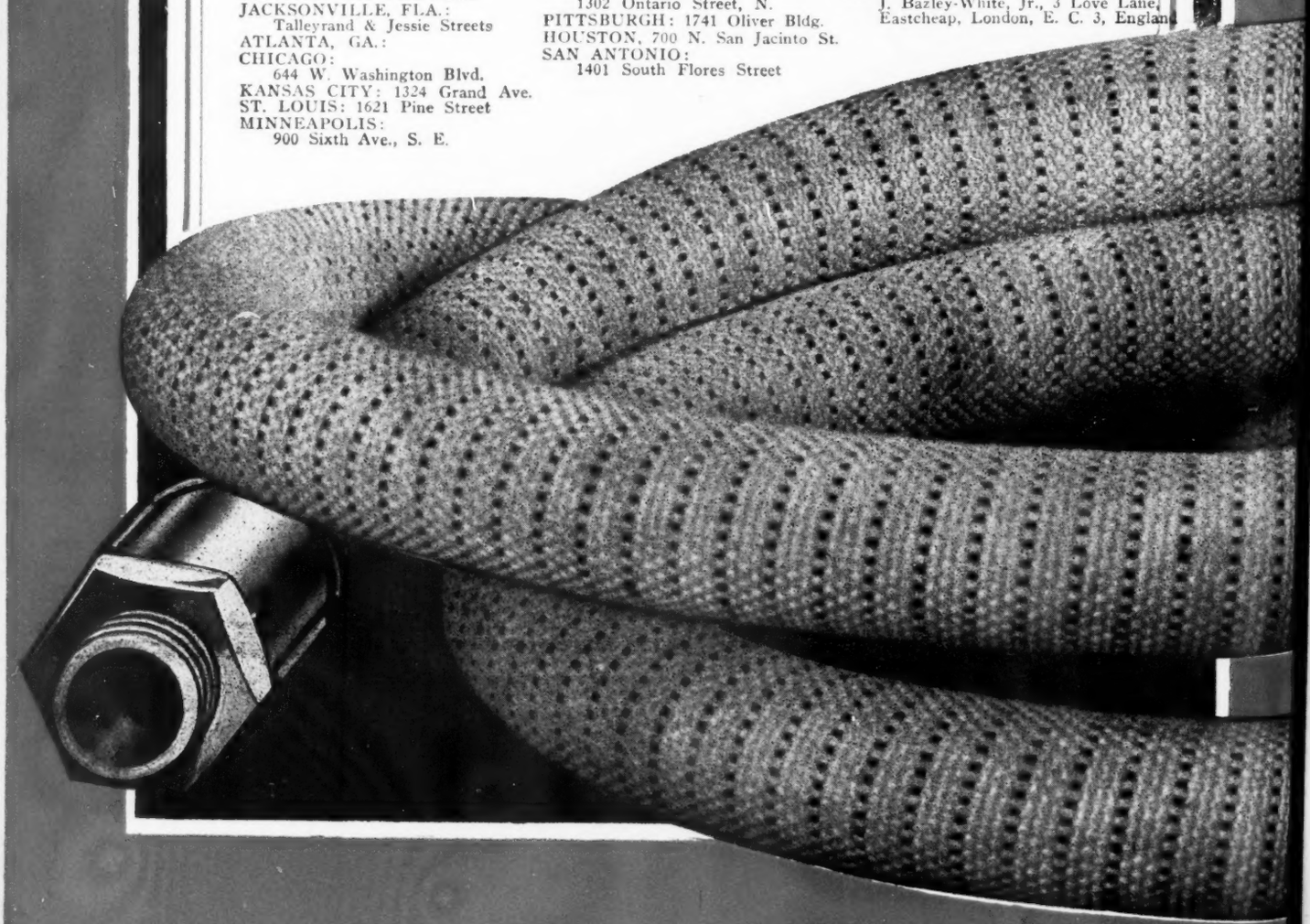


Capacity of Refinery Increased Six-Fold Without Adding More Stills

By Paul Truesdell
N. P. N. Staff Writer

ST. LOUIS, Nov. 7

ONE of the most pressing needs for improvement in the Lubrite refinery when the plant was being converted from the old lubricating plant, was in the boiler house. The old refinery was equipped with three Frost boilers rated at 150 h.p. each. These boilers were designed for coal burning, but were set very low giving a fire box too small for efficient combustion.

The enlarged scale of operation of the refinery, plus the requirements of the cracking plant, made constantly heavier demands for steam. In overloading the boilers to supply this need, the resulting steam pressure was too uneven to provide proper plant operation. At the immediate time it was deemed inadvisable to make the investment necessitated by the installation of new boilers.

Grates were removed from the old boilers, the combustion chambers enlarged, and oil burners installed. The increased efficiency resulting from this change tided over the situation until a year ago, when two new Erie City boilers of 150 h.p. rating each were added to the old battery.

One of these new boilers is now operated entirely on residue gas from the compression plant, which will be described later. This is gas that formerly went to waste. That boiler is developing 200 h.p. on it. Arrangements are now under way to recover additional gas, and it is planned to operate two boilers entirely on this commodity which formerly disappeared into the air.

Back To Coal

After the installation of the new boilers, the oil burners were removed from the old boilers, the fire boxes again revamped, and they went back to coal. The power plant is equipped to burn coal or oil, depending on the market price of fuel oil, which has to be at a relatively low price to be economically used, due to the supply of good and cheap coal adjacent to the refinery in the southern Illinois coal fields. The Fleming units are operated with oil burners, as the nature of their equipment requires the use of oil or gas.

While there is no automatic coal handling machinery at this refinery, wheeling of the coal into the boiler house is entirely eliminated. A high narrow bin is built alongside the boiler house wall on the outside, and the coal cars are run up close to this bin. The shovelers throw the coal from the cars into the bin, from whence it gravitates down in front of the furnaces within easy reach of the firemen through big doors in the boiler house wall.

In connection with the operation of the Fleming cracking plant, the following important problems were faced by the management:

1. To speed up the through-put of charging stock;
2. To obtain proper separation of the condenser water from the pressure distillate;
3. To eliminate all hazard in connection with the operation of the units, so far as humanly possible.
4. To reduce the down time of the units for cleaning.
5. To keep a cumulative check day by day on the operation of the units.

A careful study was made of the whole system. It was decided that the most important limiting factor on the through-put of the charging stock was the size of the dephlegmators. All dephlegmators were immediately increased over the size originally recommended for the units resulting in an increased capacity for each unit, and considerably greater through-put for the cracking plant.

Water Separation

The second problem was harder. In the Fleming still, condensation of the pressure distillate is affected by bringing the vapors from the still in contact with a jet of water in a patented condenser. Water and condensed pressure distillate pass together into a settling tank where the water settles out, leaving the distillate clean. At least, that is what it ought to do, and what has been easily accomplished in all previous Fleming installations. At the Lubrite plant, however, due to the presence of some peculiar constituents in the condenser water, the proper separation did not take place in the settling tank, the water and pressure distillate forming an unbreakable emulsion which virtually prohibited the proper operation of the cracking plant.

After a great deal of investigative work, and when the problem seemed impossible of solution, a remedy was discovered in the treatment of the condensing water by the introduction of a small amount of alum. A simple arrangement for mixing the alum was worked out. A small steel building was set up for storing the alum in bags. In this house was placed a small open tank set so its top is flush with the ground. The water for the Fleming condensers is taken from a spray pond as before mentioned, and the mixing tank is placed on the line, through which the make-up water is pumped into the spray pond. The alum is pumped in the proper amount in the mixing tank and mixed with the make-up water as it passes through on its way to the pond. The system has worked most successfully; the distillate and condenser now separating sharply and almost instantly.

One of the great hazards in operating cracking units of the Fleming type is the danger from a small amount of water being contained in the charging stock and entering the cracking stills. Although the equipment has a large factor of safety over the normal operating pressures, the introduction of a small percentage of water, which under certain conditions would be instantly turned into steam, would result in building up a pressure much greater than any equipment could withstand. Water in the charging stock can come either through imperfect settling out of the condensed steam from distillation or even through a small leak in the condenser coils.

Extraordinary precautions are taken to prevent the entrance of any water into the cracking stills. All gas oil to be charged to the system is taken from the main storage tank to a special settling tank near the cracking stills. Here it stands for nine hours under a uniform temperature of approximately 180 degrees F. Before any oil is charged to the Fleming stills a laboratory test with centrifuge is made on the entire charging stock. If this test shows the oil to be water free it is pumped in to the cracking stills. As a double check, however, before the batteries are started, another sample is taken from the top and bottom of each still and tests are run on these in the laboratory, which must also show practically no water. Three-tenths of one percent moisture has been established as the allowable safe limit of water content and if the oil in the stills shows a higher content than this, it is pumped out and allowed to settle further until it comes within this limit.

Keeping Down Idle Time

Idle time of cracking equipment is an expensive factor. The time formerly needed for cleaning Fleming stills, which was done by lowering men on a staging inside the still to scrape the carbon from the walls by hand, took from 10 to 20 hours, depending on the condition of the still.

The Lubrite company has substituted mechanical for hand cleaning, using motor driven cleaners manufactured by the M. W. Kellogg Co., New York. The

device consists of a steel shaft 5 or 6 feet long, operated by a small motor. To the top of this shaft are attached four arms on swing joints. The ends of the arms are fitted with two herringbone gear wheels with cutting edges. The arms, when spread out on either side, are long enough to span the diameter of the still and bring the wheels against the still walls. At the top, the cleaner is fitted with a heavy swivel.

To make handling easy, the cleaner is mounted on a small steel car on a slanting platform. The car runs on a little track so that it can be pushed right under the manhead at the bottom of the still. The manheads at the top and bottom are taken off and a wire line, which is lowered from a windlass on top of the still, is attached to the swivel, and the cleaner is hauled up into the shell. The motor is started, which revolves the cleaner. Centrifugal force throws the arms out sidewise and the cutting wheels travel rapidly around the walls of the still, cutting off the carbon deposit cleanly. The cleaner is pulled up and lowered down as it revolves, so that every part of the shell is cleaned. Cleaning with this mechanical device is done in two to two and one-half hours, the labor cost being one-third the cost of hand cleaning, in addition to which the down time is greatly reduced, the average saving in down time being approximately 14 hours. The company owns two cleaners, one of which is kept in constant reserve, in addition to which all repair parts are maintained in the company's store room. The reserve cleaner has paid for itself many times over when operating accidents have occurred to the regular cleaner, which would have resulted in great delay if the reserve equipment were not available.

The company uses a day to day special report of the cracking plant which shows every item affecting through-put, yield, recovery, charging and firing time, cleaning time, etc. These reports are cumulative and show the condition for the previous day as well as the condition for the month to date, and furnish a practical and intelligent picture of the cracking plant operations.

Cracking Efficiency Increased

The efficiency of the cracking plant has been constantly increased. The four cracking stills were originally designed to run 800 barrels of gas oil per day, giving a recovery of 50 to 52 per cent pressure distillate which yielded 70 to 73 per cent finished U. S. Motor gasoline, thus giving approximately 71 barrels gasoline per still per day. The loss in the earlier operations was approximately 6 per cent and the fuel consumption 10 to 10½ per cent.

By using the improvements mentioned above and the careful training of the cracking plant crew, the company has consistently improved its operation, so that at the present time the stills are charging approximately 1150 barrels of gas oil per day, and are producing 103 barrels of finished gasoline per still per day, an increase of 32 barrels of gasoline per still per day over the earlier operations. At the same time, the fuel consumption has been reduced to approximately 8 per cent and the loss to approximately 4 per cent.

Several months ago the management decided on the installation of a small compression plant, for the recovery of waste gas in the refinery. The installation consists of an Ingersoll-Rand direct connected steam compressor and the usual cooling coils, accumulator tanks, etc. The plant has a daily capacity of 250,000 cubic feet of gas, and operates at 60 to 75 pounds pressure. At this time the plant is doing a daily recovery of 1200 to 1500 gallons of gasoline and approximately 180,000 feet of residue fuel gas. An additional unit is being installed and will make possible the handling of all waste gas in the refinery.

One feature of the Lubrite refinery that is seldom found at a plant of this size, is the complete and efficient laboratory in charge of a skilled practical chemist with two assistants. The laboratory is finished throughout with white porcelain paint and the chemists when on duty wear white uniforms. All products are given every essential test in the laboratory and the management feels that the careful inspection of the products, and the rigid standards that are maintained, have made themselves felt in the wide acceptance and high regard in which Lubrite products are now held in St. Louis and contiguous territory.

In a refinery such as this, where a large proportion of the products are shipped by truck, the loading of trucks is an important matter. A small but very efficient loading rack stands near the entrance to the refinery. It is composed of two 20,000 gallon tanks mounted horizontally on steel supports at a height of about 10 feet from the ground. Gasoline from these tanks flows by gravity into a header from which lead six 4 inch filler pipes mounted on swing joints and counter balanced. The driver spots his truck under one of these filler pipes and pulls it down and holds his nozzle over the filler opening in his truck. 1000 gallon trucks are loaded in this fashion in 6 minutes and when six trucks are loaded at once the entire six can be loaded in 8 minutes.

In addition to its gasoline and motor oil business, the company has established a large local business in furnace oil, which it manufactures for domestic and commercial consumption, in four grades ranging from 24/26 gravity known as its No. 1 grade to 38/41 distillate, known as its No. 4 grade. The use of domestic burners in St. Louis is increasing rapidly and offers a ready market for these products.

The train schedules in and out of St. Louis require a lay over of half a day when passing from the north or east through St. Louis to the Mid-Continent fields, and likewise when returning. The Lubrite people are always glad to take visitors through their refinery, which is readily accessible from down-town St. Louis, Mr. Ashton says.

Lubrite Refining Company
Summary Daily Operations—Fleming Stills

Date.....1925

	Still #	Run #	Still #	Run #	Still #	Run #
Outage						
Temperature						
Gallons @ 60° F						
Overhead in Gal						
Total thru-put						
Charging to over						
Over to on feed						
On feed to off stream						
Total hrs. on stream						
Off stream Empty						
Steaming						
Cooling						
Cleaning						
Finished cleaning to chg						
Idle time						
Cycle						
Stream gravity						
Pressure						
Temperature						
Stream Temp						
Coke						

DISTILLATIONS

P. D. Gravity	G. O. Gravity
1 B. P	1 B. P
10	10
20	20
30	30
40	40
50	50
60	60
70	70
80	80
90	90
E. P	E. P
% @ 407 Gr.	% @ 500

YIELDS BASED ON GROSS GAS OIL CHGD.

	Today Gallons	To Date Gallons	Percent
P. Distillate			
G. Oil			
F. Oil			
TOTAL			
LOSS			
G. O Chgd			
F. O. Consumed			

REMARKS:

Form used by Lubrite Refining Co. to keep daily check on performance of Fleming cracking stills.

T. F. Manville, of Johns-Manville, Dies

NEW YORK, Nov. 5.—The death of Thomas Franklin Manville, chairman of the board of directors of Johns-Manville, Inc., on Oct. 19 in New York City, marks the passing of one of the great business builders in the country.

For the past 25 years, Mr. Manville was the directing head of the company bearing his name, which is the world's largest producer and manufacturer of asbestos. In 1924, his brother, H. E. Manville, succeeded to the presidency of Johns-Manville, Inc., while T. F. Manville became chairman of the board.

At the time of his death, Mr. Manville was president of the Arizona Asbestos Co., treasurer and director of the Asbestos Wood & Shingle Co., president and director of the Canadian Johns-Manville Co., director of The Fibre Corp., director of the Fifth Avenue Bank, trustee of the Franklin Savings Bank, president of the board of trustees of the Fifth Avenue Hospital, and president and director of the Manville Securities Co. He was a member of the Bankers, Metropolitan and Union League Clubs in New York City.

Fry Pump Export Manager Dies

ROCHESTER, PA., Nov. 5.—J. C. Gonzales, manager of the export department of the Guarantee Liquid Measure Co., with headquarters here, died Oct. 30, at the Homeopathic hospital at Pittsburgh. Mr. Gonzalez was formerly in the export department of the Pittsburgh offices of the Transcontinental Oil Co.

He is survived by his wife and two small sons.

President of W. Va. Company Dies

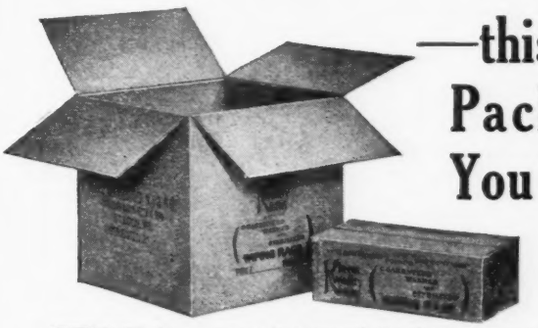
HUNTINGTON, W. VA., Nov. 5.—D. T. Evans, who was president of the Midsouth Oil Co., and of the Tri-State Refining Co., of Huntington, passed away recently.

The business of the Tri-State company is being conducted by G. C. Davison, of New York City, a business associate of Mr. Evans'. The Midsouth company is being handled by Mrs. Evans, who has always been her husband's business partner and actively engaged with him in all his activities.

AMARILLO, TEX.—The Amarillo Refining Co. has increased its plant capacity from 2500 barrels to 6000 barrels daily, and is making additional improvements that will make it one of the most complete skimming plants in operation, according to E. L. Moon, manager.

The company is now laying a 4 inch line from the refinery to the Santa Fe fuel storage and it will be delivering fuel oil within a few days.

Oil Men!—*for* YOU



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THE foremost industrial plants specify Kleen Kwality Kloths when they order bales of wiping rags. They want the clean, sterilized, lintless wipers that the name Kleen Kwality Kloth assures. *Now,* oil men who use less-than-bale quantities can get this same protection. Kleen Kwality Kloths are put up in 10 lb. packages, six pkges. to the carton.

Ask Your Jobber Your jobber handles Kleen Kwality Kloths and sells a lot of them. Ask him about the grades, prices and unexcelled quality.

Aaron Ferer and Sons, ST. LOUIS

Branches in main industrial centers of the U. S. A.

Kleen Kwality Kloths

Fig. 106
Screwed, Jenkins Standard Bronze Globe Valve

Fig. 325.
Screwed, Jenkins Standard Iron Body Gate Valve.

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A Jenkins Valve is a husky. It's built to stand plenty of work, and hard work, too.

Made from analyses-proved metals, each made and tested with typical Jenkins thoroughness.

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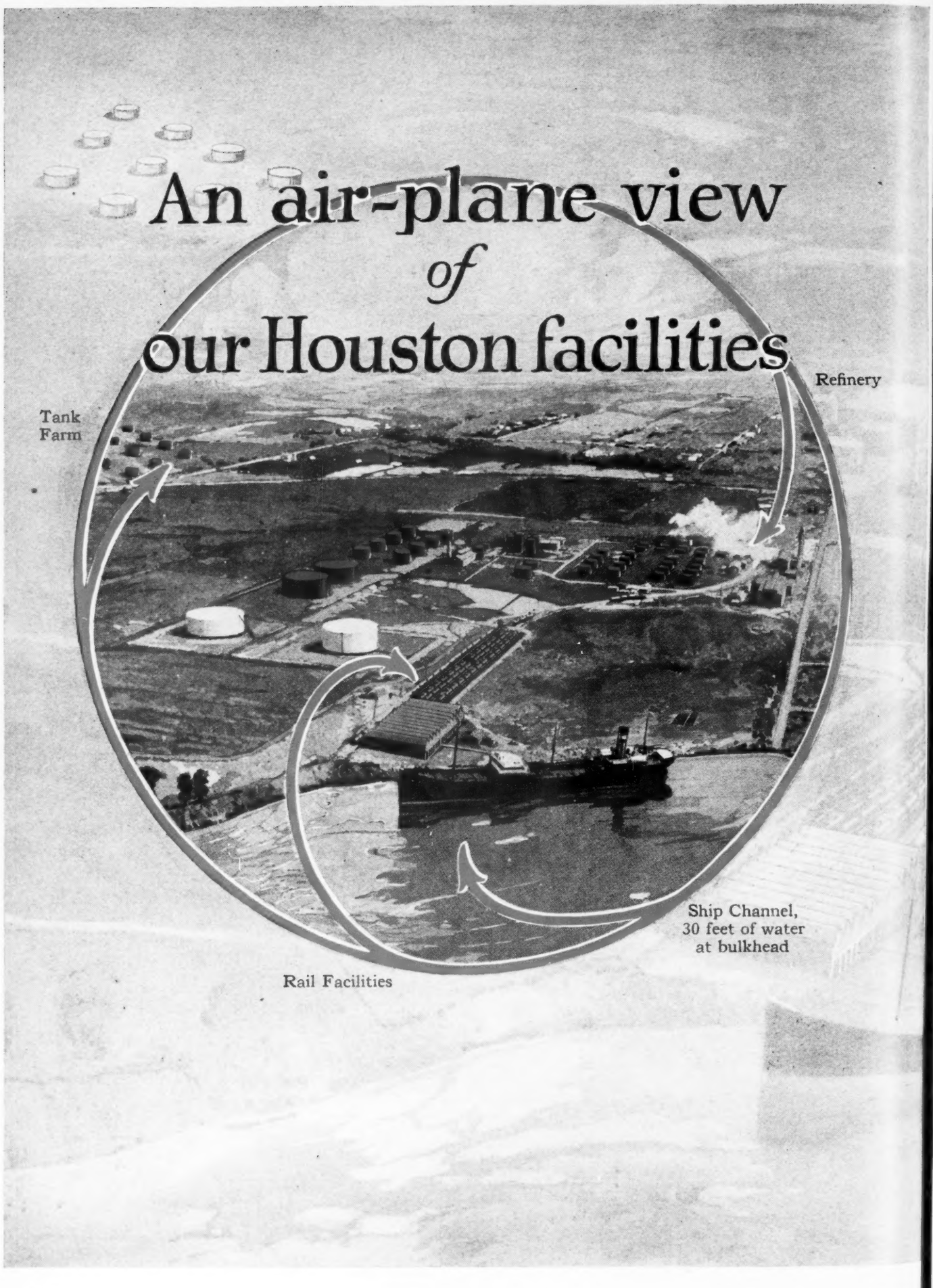

An air-plane view
of
our Houston facilities
Refinery
Tank
Farm
Ship Channel,
30 feet of water
at bulkhead
Rail Facilities

Industry Expects Good Year in 1926 Despite Growing Stocks

By Paul Wagner
N. P. N. Staff Writer

HOUSTON, Nov. 7

REGARDLESS of market reactions that may result in the meantime, the petroleum industry is already looking forward to 1926 as another profitable year.

A background of optimism is present because of the feeling that the period of extraordinary accumulations to stocks has been ended for the present and that consumption is gaining something in its race with production.

The year 1925 will end with a net increase in overall storage stocks that probably will bring total inventories to approximately 550,000,000 barrels, or an increase of some 30,000,000 barrels above the earlier peak totals.

This situation brings up two diametrically opposed thoughts. One has to do with a lowered percentage gain in storage stocks in a yearly period of materially increased consumption of refined products. This is to be placed on the side of optimism. The other thought has to do with the continuous growth of overall storage since 1920, total inventories now representing some $2,000,000,000 tied up in crude oil and products constituting above ground reserves. In the face of constantly improving methods of gasoline production, such as cracking, these stocks assume even greater proportion than they would when considered purely on a barrelage basis, this accounting in part for the pessimism felt in some quarters at the continuance of accumulation.

Information based on government reports and other authoritative data indicate withdrawals of crude from storage in light oil refining districts such as the Mid-Continent up to the present time. The country as a whole, however, will show some accumulation of crude to storage; with prospects that the main gains will be made in November and December.

Estimates made in quarters usually equipped with the best information upon which to base judgments call for net gains in gasoline storage in December but contemplate consumption keeping pace with production (manufacture) through November, unless winter appears earlier than expected.

Curtailment in refinery operations have been made in some quarters and the effect of the slowing down of affected plants is taken into account in the foregoing appraisal of the future situation. Major company plants are mainly considered in this statement, although in some cases smaller refiners are included.

Because of good earnings in the first half of 1925, the industry may be considered to have improved its position over 1924. This condition is similar to its less burdensome position last year as compared with 1923. Similarly, the industry should be better prepared in 1926 to get "further out of the woods" than it has been in recent years, notwithstanding that conditions still fall short of idealism.

Comparative Gasoline Stocks

Despite astounding figures for gasoline production in most refinery groups of the country for July it appears that total motor fuel inventories, Aug. 1, last, were 10,133,495 gallons lower than their aggregate as of the same time in 1924.

It is estimated on the basis of United States Bureau of Mines figures that the Mid-Continent refining district produced 60 per cent more gasoline in July of the present year than it did in the same month of 1924; the interior refining group that forms a ring around the Mid-Continent produced roundly 30 per cent more gasoline; the Gulf coast and Atlantic seaboard groups increased their production only a nominal amount; and California made an increase amounting to more than 50 per cent.

The tremendous rate of gasoline consumption experienced in the first seven months of 1925 was responsible for the relatively low motor fuel inventories when considered from this comparative viewpoint.

Bureau of Mines figures form the background for a compilation showing that the increase of consumption in the first seven months of 1925 amounted to 26.2 per cent over the corresponding period in 1924. The total increased consumption for the full 12 months of 1925 is now estimated at 24.8 per cent over 1924.

It appears, therefore, that the gasoline marketing situation is not so bad in terms of stocks actually in existence as it is with regard to the places where these inventories are held. The proximity or non-proximity of these stocks to competitive markets is the governing factor influencing the present distributing situation.

Bureau of Mines Figures

It is impossible to get a true picture of comparative total gasoline stocks in the industry without charging back to 1924 approximately 150,000,000 gallons of motor fuel first taken into account in the United States Bureau of Mines figures as of June 1, 1925.

The gallonage mentioned represents storage stocks held on the Pacific coast outside of refineries which had been previously unreported until inclusion with other May figures in Bureau of Mines calculations. Approximately that quantity of gasoline had been unreported theretofore.

Accuracy demands, therefore, that any storage comparison made since the issuance of the June 1 figures must take cognizance of 150,000,000 gallons more gasoline than shown by monthly figures prior to that date.

After such revision is made it will be found that Aug. 1, 1924, stocks of gasoline in the United States totaled 1,620,923,201 gallons, as against 1,610,789,806 gallons held in storage in the United States on Aug. 1, 1925. It appears, therefore, that gasoline stocks on Aug. 1, last, were 10,133,495 gallons lower than they were at a similar time in 1924.

As compared with total stocks of 1,329,503,185 gallons, revised figures, Jan. 1, 1925, the Aug. 1, last, figures showed an increase of 281,286,621 gallons. The last mentioned figure fails to check by some 18,000,000 gallons with a figure representing the excess of production and imports over consumption and exports of gasoline for the first seven months of 1925. That excess, as shown by the totals of Bureau of Mines figures for the first seven months of the year, reached up to 299,417,580 gallons but presumably some of the figures are subject to revision.

Mid-Continent Situation

The Independent refiner in the Mid-Continent territory has kept his stocks relatively low and made up his business by not letting the major companies have it. It may be, however, that the Oklahoma-Kansas refiner pushed too far in trying to meet the competition of California gasoline re-shipped from the Atlantic seaboard as far west as Michigan. Such an effort to empty tanks on a market range (that perhaps should not have been attempted) probably caused the recent Group 3 gasoline price reaction from which a recovery has now been partially staged.

Atlantic seaboard storage now totals about 40 per cent more than it did at the beginning of 1925 and the increase in the Baton Rouge district is roundly 110 per cent higher, as indicated by Bureau of Mines figures. The Baton Rouge increase includes California gasoline diverted to this district for storage.

(Continued on Page 88-P.)

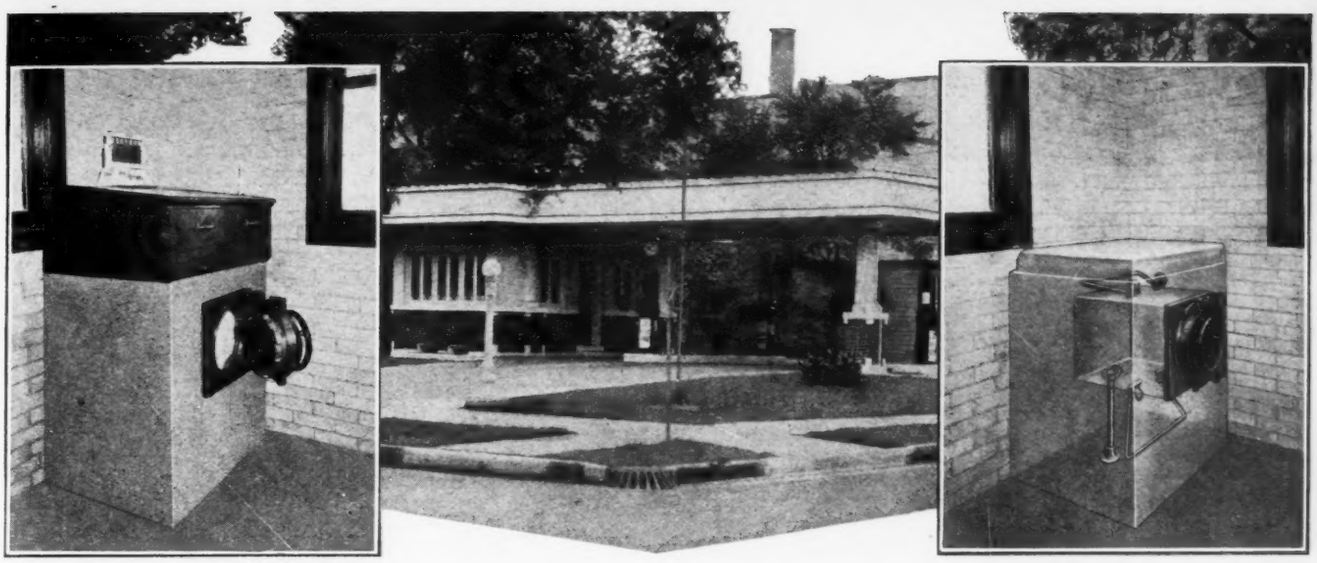
Bat's grease

We'll meet and greet you in Louisville

"Bat" Daniel Ward

The BATTENFELD GREASE AND OIL COMPANY
KANSAS CITY, MISSOURI

"Business is Ingreasing"



Protect Your Money from Thieves

There Is a York Safe Made Especially for Filling Stations

Money, left promiscuously about, is an invitation to thieves. Every passer-by and motorist can learn at a glance just how well—or how poorly—your Service Station protects its money. A mere cash register or flimsy drawer is slim protection against the stealthy thief. Carelessness may be penalized at any moment.

The York Burglar Chest is a stalwart guardian of your current receipts. Back of it is the York reputation for excellence in safe manufacturing. York Safes are serving the largest banks in the world, protecting hundreds of millions of dollars.

The York Burglar Chest, pictured above, is made especially for Filling Stations. The entire chest is case-hardened by the special York Process. Both door and body are solid steel castings. The chest is locked by massive integral lugs, built in the door and body, which firmly interlock. Liquid explosives are excluded by perfectly fitted and ground joints. The special Yale & Towne *combination* lock has automatic devices which prevent the door opening, should the drill-proof combination be tampered with.

Observe in the right hand illustration how the steel anchorings are embedded in solid concrete. Anyone can install the York Burglar Chest. He can build his own concrete forms or we will supply them. Write to our nearest branch office for complete information.

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Philadelphia, Pa., 1613 Chestnut St.
Seattle, Wash., 112 3rd Ave., South
St. Louis, Mo., 3rd and St. Charles Sts.
Cleveland, Ohio, 209 E. St. Clair St.
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Principal Builders of High Grade Bank Vault Equipment in the World

Industry Expects Good Year in 1926

(Continued from Page 88-M)

In this connection it is interesting to note that increased production of gasoline resulted in the following proportions in the several refining groups of the United States in the first seven months of 1925 as compared with a similar period of 1924:

	1924	1925
Gasoline Produced (gallons)	1,074,667,026	1,409,014,472
Gasoline Shipped (gallons)	1,063,962,652	1,296,582,929
Increase in Stocks (gallons)	10,704,374	112,431,543
Stocks at Close of August (gallons)	255,215,954	329,893,000
Ratio of Shipments to Production	99.00%	92.02%
Percent of U. S. Shipments	19.08%	18.81%

The Texas-Louisiana Gulf coast territory, which is included in the foregoing state and group totals under the headings shown, may be segregated to show increased gasoline production of 31 per cent plus as of the two periods compared.

000,000 and 12,000,000 barrels of Pacific Coast gasoline when the curtain rings down on the present year.

Seaboard Stocks Accumulate

It is gasoline piling up along the seaboard that worked to the end of creating a market recently more or less sluggish. The Mid-Continent refiner handled his business in a manner to obtain a maximum of marketing efficiency in both his manufacturing territory and parts of the area where the outlying group of interior plants must sell.

California, it then appears, was responsible almost entirely for the weakened gasoline situation that has appeared recently in the refining and distributing branches of the industry. Indeed, the statement is made to the writer by an outstanding figure in the petroleum industry that it may very well prove there will be localized tight places in the gasoline supply before the end of the year. The foregoing statement is made advisedly but with the thought in mind that the location of stocks may prove such as to work to the end mentioned.

Intercoastal Shipments and Exports from California

(Barrels of 42 Gallons Each)

		1924 Average Monthly	1st 8 Mos.-1925 Average Monthly
Crude	Intercoastal	3,050,000	1,307,000
	Foreign	560,000	251,000
	Total	3,610,000	1,558,000
Gasoline	Intercoastal	211,350	880,000
	Foreign	452,740	573,000
	Total	664,090	1,453,000
Fuel	Intercoastal	300,000	182,000
	Foreign	1,600,000	1,580,000
	Total	1,900,000	1,762,000
Other Refined Products	Intercoastal	204,500	29,000
	Foreign	373,030	425,000
	Total	577,530	454,000

Movement From California

California's excess of gasoline production in 1925 has been moving in foreign and intercoastal traffic in the ratio of approximately four cargoes to export as against seven cargoes to Atlantic and Gulf ports.

With 45 cargoes to move in Intercoastal traffic and 15 cargoes committed for export after Sept. 1, last, plus shipments shown in an accompanying table for the first eight months of 1925, it is estimated that Atlantic and Gulf ports will have received between 11,-

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To Sell Indiahoma Assets

HOUSTON, TEX., Nov. 6.—The Indiahoma Corp. has purchased all the assets of the bankrupt Indiahoma Refining Co. formerly headed by E. E. Schock. J. W. Colvin, president of the Keystone Building Co., has entered into a contract with the Indiahoma corporation to dispose of all the assets of the company consisting of 372 tank cars, an 8000-barrel refinery in Okmulgee, Okla., a 4500-barrel refinery in East St. Louis, 250 miles of pipe line connecting the two plants, 1,400,000 barrels of steel storage and some production and undeveloped acreage.

ST. LOUIS, MO.—A good way of preventing electrical currents at service stations from going astray, which Otto W. Koch, manager of I. K. Products Co. of this city, noticed while on a trip through Texas, was the running of a bare wire to the chassis or any metal part of the machine before inserting the gasoline hose in the gasoline tank.

ATHENS, TEX.—Robbins Bros., oil marketers here, have installed three pumps in this territory within the past two weeks. Business is slowly but surely growing all the time, John T. Robbins reports.

Good Drilling Time in Turner Valley

OTTAWA, CANADA, Nov. 7.—Development of the Turner Valley oil field in Alberta continues apace. Three wells, No. 5 Royalite, Vulcan Oils and McLeod No. 2, are making rapid progress and it is probable that, barring accidents, the three of them will reach the reputed oil sands before winter. No. 4 Royalite continues to produce naphtha and gas in tremendous quantities but the gas will not be of commercial value until the gas company reaches an agreement with Calgary for pipe-line entrance to that city. Vulcan is down to 2400 feet and McLeod 2515. Both wells are making drilling records.

In the Wainwright field, the British Petroleum Co. is arranging to sell its fuel oil product to the Canadian Northern Railway.

Drilling is progressing in the Medicine Hat area, and it is possible that results, one way or the other will be achieved this year.

Away in the far north, at Fort Norman, the Imperial Oil, Limited, new well, encountered a 100-barrel well in shale, at 1063 feet. The drillers went through this shale and on down to 1602 feet before discontinuing for the year. This shale was struck at the same depth as it was met in the drilling of the Discovery Well which is nearby. These wells are located about 53 miles south of Fort Norman which is about 1400 miles northwest of Calgary measuring by river and lake transportation.

Operations will be resumed next spring, it is stated.

Tide Water's Philadelphia Branch Has Dinner Dance

NEW YORK, Nov. 6.—The southeastern department of the Tide Water Oil Sales Corp. at Philadelphia recently held its first annual dinner and dance at the Rittenhouse Hotel, Philadelphia, which was attended by 125 employes and guests including a delegation from the main offices at New York City.

F. D. MacEachern, manager of the southeastern department, was one of the speakers. Short speeches were also made by R. W. Mowry, sales supervisor at Philadelphia, and chairman of the reception committee; F. H. Dickison, vice president and general manager at New York; L. W. Sweet, assistant to Mr. Dickison; G. K. Hambleton, automotive sales supervisor of eastern territory; W. H. Ray, eastern department manager.

SHEFFIELD, PA.—J. B. Hadden, Mill, is adding a 165 H. P. Bessemer direct-driven compressor unit to his plant. The plant is housed in a tile block building, with traveling crane located on top of the building walls.

Oil Men Say Crankcase Service, Though Free, is Profitable

By Roger B. Stafford
N. P. N. Staff Writer

CLEVELAND, Nov. 7—THE growth of the oiling and greasing business in connection with gasoline service stations has been so great that this service is almost universal with companies operating gasoline stations.

This is shown in 130 returns to questionnaires mailed by National Petroleum News to gasoline and oil distributors picked at random and doing business from the Rocky mountains eastward to the Atlantic coast. Only three gasoline distributors of the 130 that answered the questionnaires, did no oiling or greasing business. Ninety-three reported they did a complete oiling and greasing business at at least part of their stations and 34 that their operations in this branch of the service station business were confined to draining and filling crankcases.

Although all but a few distributors charged only for the oil used in refilling crankcases and nothing for the service, virtually all reported the business was profitable. Of 96 answers to the question, "Is this complete lubricating service profitable?", 86 said it was, two were doubtful, and only eight said it was unprofitable.

Sixty-nine of the 96 said they intended to expand their oiling and greasing business; five said expansion depended on future conditions, and 22 said they either did not expect future expansion or had no plans for immediate addition to this service.

Seventy-nine companies reported they gave oiling or greasing or both services at all of the service stations they owned. Twenty-two said they gave the service at only a part of their stations. In the latter class were some of the large Independent distributors who might offer the service only at stations situated where they had space sufficient to keep cars receiving the service out of the way of gasoline trade.

Out of 117 replies to the question, "Do you charge extra for the service given or is it covered in the price of oil and grease?" 29 reported "yes" but only three, analysis of other answers in the questionnaires reveals, really charge for the draining and refilling of crankcases. The others charge only for oiling and the greasing services, other than crankcase. Some marketers reported they oiled springs free and charged only for the grease in greasing transmission and differential gears. In the latter class were 88 of the 117 that answered the question.

Few Remind Patrons

Ninety-nine distributors said their oiling and greasing customers came to them regularly and to these regular patrons, 34 marketers had some means of keeping them reminded of the time to have crankcases refilled or the entire automobile greased. Some have card or letter systems which they mail to the customer. Others merely put stickers or some similar device on the instrument board to remind the car owner or driver of the time when he should attend to his lubrication. Eighty-six distributors said they used no means to remind customers of the lubrication

Station Man Go Gets It

TULSA, Nov. 7.—Finus Kirk, filling station attendant at Marland Refining Co.'s station at Fifteenth and Detroit, has a new scheme of getting business for his station at dull periods of the day.

When business is slack Kirk slips away from the station for a few minutes and comes back driving a car which he gives a thorough greasing after draining and refilling the crank case.

In four days recently Kirk brought in nine cars to change the oil and have crankcases drained.

Possibilities of Greasing Business Not Fully Realized

INDEPENDENT jobbing companies realize the possibilities for building up business in lubricating oil and grease sales at service stations through drainage racks and pits, and pretty generally offer this service to the public, as is shown by a canvass made recently on this subject by National Petroleum News.

Only comparatively few companies, however, if this canvass is a fair cross-section of the business, seem to sense the extent to which a real lubricating service can be built up, with the responsibility for oiling and greasing a car taken off the owner's mind, and the oil company getting a fair service charge for its work, in addition to the cost of the materials.

With the extreme competition in gasoline sales likely to make this product a more and more uncertain avenue of real profit for the local Independent company, the opportunity exists for such companies to feature more a complete lubricating service for cars, which competition would not so quickly affect.

Consider the possibilities in awakening in the mind of the average car owner in your territory the realization that the hit-or-miss changing of the oil and greasing, as he has done it in the past, cuts down the life of his car by perhaps half, and brings heavy repair charges.

Consider interesting him in something like round-house service given his automobile, with correct lubricating scientifically applied, and at the same time showing him the small cost of such a service, when compared with the lessened depreciation on his car and the repair bills he is saving.

There is good sales and advertising material to prove the value of such a complete lubricating service in the service manual furnished with almost every make of car and in published talks of automotive engineers the country over. The head of the Packard company once said if his cars got only half the attention given a steam locomotive in the round-house they would last forever. It is possible that local car dealers could be interested in such a service as given by the oil company at a conveniently-located service station or two, as a means of insuring better care for the cars leaving their hands.

The oil company, on its part, to carry on such a service successfully, would have to back up its sales and advertising work with actual results. It would have to be prepared to determine that the correct oil for the make and wear in a particular engine were given, that the greasing and oiling was actually done, that the car owner was jogged sufficiently to get the car in at the right time to renew the lubrication, even to sending a man to get the car and bring it to the station, if necessary.

Special rates could be made for the service during the free hours at the station and to keep this class of business away during the time of busiest gasoline trade. It might lead into extensions in the way of other services, such as washing a car, tightening fenders and bumpers, in short such servicing as a car needs regularly, but for which it is seldom taken to the repair shop.—V. B. G.

service but many expressed belief that they should do something.

Less than half of the customers ask for some particular oil or grease, according to returns from 93 distributors. Sixteen said their customers seldom, or never, asked for a particular oil. Ten said most all their customers requested a special brand. Twenty said about half of their customers made such a request, but 39 said less than half of their customers did.

Out of 126 reports, 51 distributors said they handled their own oils, some branded, some not branded but just sold by grade light, medium, heavy, extra heavy, and so on. Twenty-eight handled only nationally advertised brands or refiners' brands of wide distribution although not actually nationally advertised. The remaining 47 handled both national and local brands.

There were 28 distributors who reported handling pure Pennsylvania motor oils, thus tying up with the advertising campaign of the producers and refiners of Pennsylvania grade crude oil. These returns included both branded and unbranded grades of Pennsylvania oil.

National Brands Handled

Fifty-one handled one national brand. This number included the Pennsylvania oils which are either nationally advertised or carry the refiners' brand names. Twenty-three handled two to five national brands and one company handled six national brands, about 20 grades in all.

Charges for greasing varied in different communities, prices for the work depending a great deal on local competitive conditions. One Iowa marketer oils springs free and charges only for the oil and grease used in crankcase, transmission, differential and pressure system.

A West Virginia company charges $1.05 to $2.50 for chassis oiling and greasing, the charge depending on the make of car. A Kansas oil man charges only 50 cents to $1.50 for the same service, and 75 cents to $1.50 seems to be the prevailing price for chassis oiling and greasing. Another Kansas man charges 75 cents an hour for oiling and greasing plus the price of the oil and grease used. An Illinois company has a flat rate of $1.50 for greasing all cars.

While one company oiled springs free, an Illinois company which was a pioneer in the business of lubricating an automobile thoroughly and not just haphazardly charges 25 cents to $1.50 for spring lubrication. The same company charges $1.50 for cleaning and refilling the differential and transmission and $1 to $2.50 for oiling and greasing a car. A Virginia company charges 75 cents for greasing small cars and $1 for large cars plus the cost of the grease.

An Ohio company has this schedule for greasing: Fords, 50 cents; Chevrolets, Overlands and cars of this class 75 cents; Davises, Reos, Hudsons, Jordans, Dodges, Essexes and Packards, $1, and Pierce Arrows, Cadillacs and Lincolns, $1.25.

A South Dakota company charges $1 to $4.50 a car for complete oiling and greasing. One in New York state charges $1.50 to $3. One company charges 25 and 50 cents for penetrating oils for springs and body squeaks. An Iowa company charges 2½ cents per cup for greasing and 25 cents per stroke of dispenser for greasing differentials and transmission. One half pound of grease is injected at each stroke.

The questionnaires brought out one unusual merchandising plan, this from the firm owning two stations in a fair sized Illinois city. This firm contracts with the automobile owner to service his car for a year at a flat price. The rates are $10 a year for Ford, $15 a year for Chalmers, Chandler, Chevrolet, Cole, Dodge, Essex, Flint, Franklin, Haynes, Hudson, Hupp, Jewett, Marmon, Maxwell, Nash, Oakland, Oldsmobile, Overland, Paige, Reo, Stearns, Studebakers and Willys Knight, and $20 a year for Buick, Cadillac, Jordan, Lincoln, Locomobile, Packard, Peerless and Pierce Arrow. For other cars the applicant must apply for prices.

Under the contract the car owner is entitled to a thorough greasing of every Alemite or Zerk fitting once every 500 miles or twice a month, and notification of any mechanical defect which prevents a proper greasing. He also upon request may have the grease in differential and transmission changed at 25 cents per pound additional. The owner, must deliver his car for greasing between 7 a.m. and 6 p.m. The firm refuses to accept more contracts than it can serve promptly and efficiently.

Nations Oil Refineries Takes New Name

OTTAWA, CANADA, Nov. 5.—Nations Oil Refineries of Montreal has undergone voluntary re-organization. Under the re-organization, a new company, to be known as the Petroleum Products Co. of Canada will be created with a capital of $1,500,000, 7 per cent preferred stock and 35,000 shares of no par value common stock.

The president of this new company will be John Irwin, of Montreal, and with him will be associated a group which is to put up new money, possibly to the extent of $250,000. This new company will take over control of the refinery and other assets of the Nations Oil Refineries, as well as the various patents, including the patent on the Ramage process for Quebec, part of Ontario and other Canadian territories.

ATLANTIC CITY, N. J.—The new service station of the W. P. G. Service Station Co. is nearing completion, according to S. A. Joy, agent for the Sinclair Refining Co. here.

Repairing Boilers by Fusion Welding

By S. W. Miller
Past President American Welding Society

IN VIEW of the ever-widening applications of fusion welding throughout industry and the probability that repairs to boilers made in this way will be proposed from time to time, it is well that those responsible for the results should bear several points in mind. For simplicity, these are listed briefly below:

1. Most boilers are insured.

2. Many boiler insurance policies are so worded that if repairs are made without the authority of the company carrying the insurance, the policy becomes void.

3. There are Federal, State and Municipal regulations governing this work, as well as those issued by the insurance companies.

4. Only competent welders, used to boiler work, should be allowed to do the welding.

Therefore, the following precautions should be observed by the owner or his representative:

1. Examine the part of the boiler to be welded in company with the insurance company inspector, and get his approval before doing any welding.

2. Be present at the test after welding with the inspector.

3. If possible, get the inspector to sign a statement that the work has been properly done and that it has passed the test successfully.

4. If the boiler is not insured, and comes under Federal, State or Municipal supervision, carry out the above program in company with the proper authority.

If the boiler is neither insured nor under supervision of some constituted authority, ample precautions should be taken by the welder and the owner to protect themselves against possible future trouble. They should make a sketch of the location and size of the repair, with a clear statement of what was found wrong and how the repair was made. They should always make a hydrostatic hammer test of the finished job, using a pressure of 1½ times the working boiler pressure, in the presence of witnesses, and get their signature to a statement of the facts. These papers should be carefully filed away. In such a case, no welding should be done which is not permitted by law or by good practice.

In case of marine work, the welder should pass the regular examination of Federal Steamboat Inspection Service.

In all cases, the welder should make friends of the insurance and other inspectors by refusing to do work unless authorized by them, by being conservative in what work he recommends, and by doing nothing except a first-class job.

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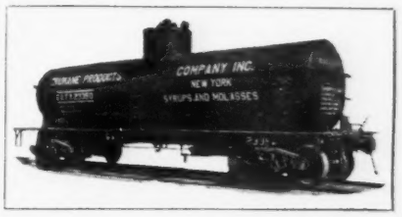

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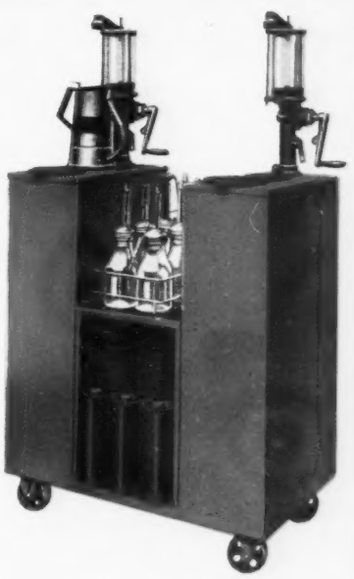

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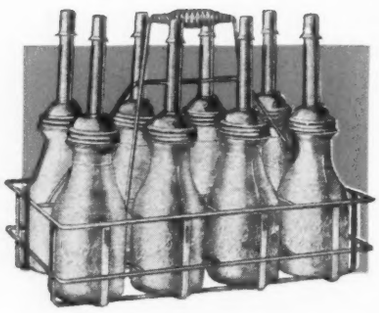

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San Antonio Oil Men at Jobbers Meet

SAN ANTONIO, TEX., Nov. 7.—Oil Jobbers of San Antonio were well represented at the annual meeting of the Texas Independent Oil Men's Association at Houston on Oct. 23 and 24.

Among those who attended from San Antonio were A. B. Slimp, president and C. A. Slimp, secretary and treasurer, Slimp Oil Co.; Elliott Jones, R. W. Steppenback, Raymond Russell, A. H. Hoffman, Jack Pape (The Conqueror), William J. Kinschel; and George B. Eggleston.

A boat ride down the ship channel and a sea-food dinner, with the compliments of the Houston oil men, through the efforts of E. J. Lindemann, were enjoyed by delegates.

Opening Day Stunt Creates Interest

TULSA, Nov. 7.—A new opening day stunt which created a great deal of interest, was recently tried out by C. H. Griffith who distributes petroleum products at Scott City, Kan., under the name of the Farmers Petroleum Assoc.

Instead of giving away kewpie dolls, candy or oil, Mr. Griffith gave every purchaser of gasoline the right to make one guess as to how far a Chevrolet car would coast when starting at a given point at a speed of 20 miles per hour. The person guessing nearest was given a $10 coupon book and the second prize was a $5 coupon book. Much interest in the stunt was displayed by Scott City motorists. The station was busy from morning until night, and there was a large crowd present when the test was made. The car coasted 1097 feet and 7 inches.

MONTOURSVILLE, PA.—The Montour Auto Service Co. has opened a modern and complete service station here, handling Tydol and Veedol products of The Tide Water Oil Sales Corp., New York. Courtesy and service is the watchword, according to C. O. Walgran, secretary and treasurer of Beyer & Fortner, Inc., Lewisburg, Pa.

PITTSFIELD, MASS.—Pittsfield Oil Co. recently installed gasoline pumps and other equipment at their stations, according to E. W. Bartram, northeastern district manager at Boston for the Guarantee Liquid Measure Co.

HARTFORD, CONN.—The Bullard Oil Co. of Hartford has just installed a new tank for 14-20 fuel oil. The tank is one of the largest in New England, having a capacity of 90,760 barrels, according to Robert F. Pearson, of the Cities Service Refining Co. at Hartford.

Longer Runs for Locomotives to Increase Use of Oils

By Special Correspondent

WASHINGTON, Nov. 6.—A big increase in the consumption of lubricating oil is expected to follow the increasing of locomotive runs on the railroads of the United States. That the runs of the engines are to be lengthened is a moral certainty. Big railroads such as the Baltimore & Ohio, New York Central, Pennsylvania and Great Northern have been trying the experiment of running their locomotives from one end of the system to the other, or so much of the total distance as experience has shown as being not beyond the limit of the endurance of a locomotive in good shape at the beginning of a trip.

The Great Northern last week achieved a record by running an engine, an oil burner, from Seattle, Wash., to St. Paul, a distance of 1782 miles in 52 hours and 35 minutes. The engine was reported to be in first class shape when it reached the end of its long run, in the course of which seven drivers had charge of it.

At present engines are sent from the beginning of a division to the farther end. A freight division is usually a little more than 100 miles long while a passenger engine division is about 250 miles. Neither is quite long enough to use up the eight hours a crew is supposed to work. So there is time wasted in the operation of nearly every train; the extra hours cannot be employed to advantage because the crews cannot be left at out of the way places.

The greatest waste, however, is in keeping good engines in the round house when they might be employed but for the rule, unwritten but based on custom, of keeping an engine on a specified division. When the divisions were established the distances between termini were great enough to keep a crew employed about 10 hours. With the increase of speed and the elimination of grades and curves, the time between termini has been greatly reduced.

In the meantime, however, labor union rules have been made such that the public has to pay for time that cannot be profitably employed by them, except possibly on such a road as the Detroit, Toledo & Ironton on which Henry Ford has arranged things so that the union rules do not place a burden on the public.

With the lengthening of the divisions goes the tradition that a locomotive cannot be run for more than one division without being sent into the round house for careful inspection and the tightening of nuts and bolts.

Railroad managers have about come to the conclusion that much of the trouble requiring the attention of engine roundhouse machinists has been due to insufficient and faulty lubrication. Back of that is the conclusion that the men who have been testing lubricating oils

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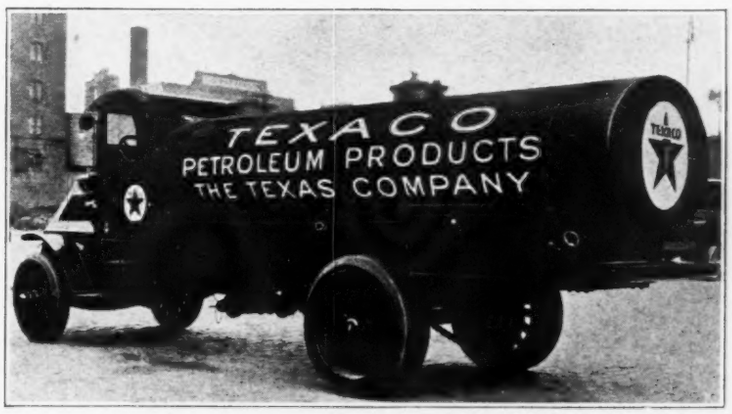

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Deepwater Oil Refineries

The Independent Jobber's Refiner HOUSTON-TEXAS

and prescribing rules for its use have been making the margin of safety too narrow. That conclusion is the one which indicates that there will be a big increase in the use of lubricating oil.

Engine drivers, for years, have been of the opinion that they had not been given enough of either oil or waste, the latter to be used in packing bearings, to assure the efficient and economical operation of the machines entrusted to their care. John D. Battle, traffic manager for the National Coal Association and for years an operating official on railroads in the south, tells interesting tales about the constant fight between the engine drivers and the mechanical department over the quantity of oil furnished them.

"I have known engineers to steal lubricating oil from each other and resort to all kinds of tricks to obtain a larger quantity than they were entitled to draw from the store keeper," said Mr. Battle. "I have known others to take out their engines under protest, going on record as saying they were taking out their engines knowing that the oil furnished was not sufficient to give efficient lubrication.

"What can be done in the economical operation of an engine has often been shown when it was deemed necessary to run an engine from one end of the line to another, on a comparatively short railroad, so as to get a live stock train from one point to another without violating the law forbidding the keeping of livestock in cars more than 28 hours without unloading for food and water. In such instances the engine that is to be given the long run is carefully packed and the engineer is given much more than the ordinary amount of oil that would be doled out for an equal number of miles, if they were not to be made in one run. I have never known an engine carefully inspected and well oiled that has not been brought through in good shape. I think that the lengthening of engine runs will become a fact in a short time."

The oil locomotive on the Great Northern that has made the record for long runs, 1782 miles, is one of 326 oil-burning engines owned by that company, 198 of which are in freight and 88 in passenger service, the others being in the yards of the company. The oil-burners are used on the fast transcontinental passenger trains. The oil burner that made the record run was selected to haul 18 cars of silk that had come from Japan, the lading being worth a little less than $5,000,000. Speed in getting that valuable freight moved, the interest on the investment alone being a great sum, was desirable, so the Great Northern used its best passenger engine to bring the silk from Seattle to St. Paul in the shortest possible time, which was a little more than two days, the same engine being used all the way. It was probably bathed in lubricating oil so as to make certain that nothing would go wrong by reason of any hot boxes.

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TRADE MARK T&B

Kansas Shale Gas Wells are Small But Persistent and Profitable

By A. F. Hinton
N. P. N. Staff Writer

TULSA, Nov. 7

THIS is the story of how a once-despised product of oil-well drilling has come into its own as a valuable factor in the fuel situation of southern Kansas; a story of how for many years this product was looked upon merely as a nuisance by drillers and operators alike, and of the inconceivable quantities of it that have been allowed to go to waste during the 34 years that have elapsed since the first commercial oil production in Kansas was found near Neodesha; the story of how demand for fuel gas led to the exploitation of this product and to the building up of its production to substantial figures. It is the story of shale gas.

In the first place, it is well to note that this particular shale gas seems to have no connection with ordinary natural gas or petroleum. Apparently it is a product of decomposed vegetation, and is very similar in its characteristics to the swamp gas which has made such a ghostly reputation for itself as the "Will-o-the-Wisp." The gas itself is practically odorless and is practically pure methane. It occurs in a black shale found at 20 feet below the top of the Oswego lime, and one of the most remarkable features of its occurrence is that it invariably is found with water. The shale never contains the gas without the water, and conversely never carries water unless it also carries shale gas. As a fuel, it is superior to ordinary sand gas, carrying 1000 or more B. T. U. as compared with 850 to 950 in natural gas.

Another remarkable feature of shale gas production is that it apparently does not decline in output, being settled production from the start and maintaining its output practically unchanged for many years. One well near Cherryvale has been producing shale gas for more than 20 years, another one seven miles southwest of Chanute has been producing for 12 years, and still another northwest of Coffeyville has been going 13 years, and all these wells are maintaining their original volume and pressure. The fact that, in drilling up the many oil pools in the vicinity, a few of the wells were saved and put to producing shale gas has given this opportunity to get an accurate line on their longevity.

Where Mid-Continent Industry Began

Neodesha, Kans. is the cradle in which Mid-Continent production, now full-grown and husky, was nurtured as an infant, for it was there that the first commercial oil well in Kansas or Oklahoma was drilled in 1891, on the banks of the Verdigris river. Subsequent development resulted in the discovery of numerous pools and led eventually to the present large production of Oklahoma and Kansas. Many of these old wells are still producing in the vicinity of Neodesha, and, of course, many of them have been abandoned as oil producers.

Top to bottom—Thomas M. Galey, shale gas operator and oil producer, of Independence, Kans., and his spaniel. One of Mr. Galey's pet shale gas wells can be seen in the background.

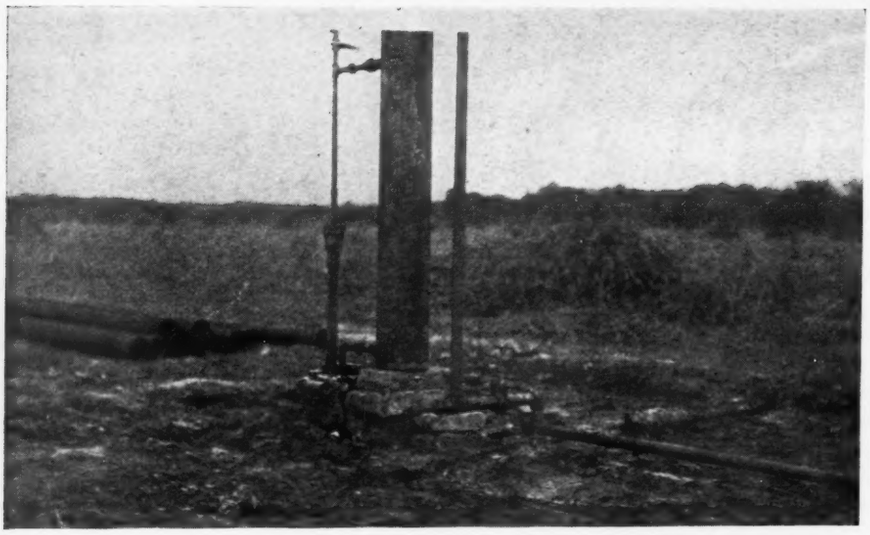
In the area now pretty definitely defined as shale-gas territory, practically all these old wells drilled for oil found the shale gas, but it was almost invariably passed up and looked upon as a nuisance, chiefly because its output was very small and also because of the simultaneous appearance of water, which of course is usually fatal to a sand-gas well. Later development in search of gas also took no cognizance of the shale gas, probably for the same reasons, and extensive gas fields were developed in the sands at lower depths. In a great many of the old abandoned wells in the district, this shale gas has been bubbling to the surface through a hole full of water for many years and can be seen doing so today. In many instances, farmers have succeeded in saving enough of this gas from the abandoned wells on their farms to light and heat their houses, and in many other instances, shale gas operators have gone into these old wells, cleaned them out, erected the standard hook-up for handling the shale gas and have converted them into useful and profitable shale gas wells.

The shale gas district as at present developed in Kansas extends from the Oklahoma line near Coffeyville to Buffalo, Wilson county, a distance of about 50 miles. Although Buffalo is the approximate northern limit, there are a few wells scattered along as far north as Humboldt. From Coffeyville south and southeast into Oklahoma some shale gas also has been developed. Beginning just east of Independence, an active shale gas territory extends for about 35 miles north, with width of from six to 10 miles. Another district, and the most active at present, is that around Altoona, about seven miles north of Neodesha, the development lying north, east, and south of that town. Another district, and the one in which shale gas was first developed commercially, is that lying northeast and southwest of Cherryvale, Montgomery county. The western edge of shale gas territory is a line drawn north and south about three miles east of Fredonia, Wilson county.

Development of shale gas production has been fostered with enthusiasm by industries in the territory, as it provides them with an assured fuel supply over an indefinite period, and the country is being covered with a network of gathering lines, many of which are laid into the fields by the industries themselves. The situation now is that all industries have been assured of sufficient gas for some time to come and that new industries must be brought in if the shale gas business is to continue active in opening up new territory. At present, it is estimated there are 500 wells in the entire district, making about 15 million cubic feet of gas daily. Operators say that if a market for as much again could be found it could be developed within 60 days. About 50 strings of tools are operating in the shale gas district.

Well Average Small

It will be noted that the wells' individual output is very small, averaging about 30,000 cubic feet each. The largest shale gas wells yet drilled have never exceeded 250,000 cubic feet a day. From the standpoint of an Oklahoma producer, who looks upon a one million foot gas well as a little well, and who doesn't begin to call them large until they get up around 25 million feet a day, it seems incomprehensible that op-



Close-up view of connections, shale gas well, Kansas.

erators actually would fool around with wells making 30,000 cubic feet of gas, and making it with much water, at that. It is a fact, however, that these little wells are profitable and that their output represents a most valuable resource. The technique that has been developed for handling this small amount of gas and separating it from the water is very interesting, and is unique in the oil industry, so far as the writer knows.

The black shale containing shale gas is found in a persistent bed lying about 20 feet below top of the Oswego lime, coming as a break in the lime, followed by five feet more of the lime and another black shale horizon. The gas is found sometimes in the upper break, sometimes in the lower, and sometimes in both. Top of the Oswego is found at around 620 feet in the Altoona district, 520 feet in the Chanute district, and 400 feet in the Coffeyville district.

How Wells Are Equipped

The wells are drilled with machines and use from 200 to 300 feet of 6¼-inch casing to shut off upper waters. This casing is pulled after completion, only a small amount of surface pipe being left in the hole. A string of two-inch tubing is run to bottom of hole, with tubing packer set just at the top of the Oswego. A cage is set at top of gas producing shale. The packer is set at least five feet above the cage, and preferably more, up to 20 feet, for the purpose of creating a pressure chamber. About a foot above the cage a two-inch Henceroth rubberless packer housing is inserted.

In small wells, a string of one-inch tubing is run inside the two-inch, carrying at its lower end the Henceroth packer seat, which consists of a cone-shaped machined piece with a lead band sunk into the metal, making an effective shut-off. The Henceroth packer is manufactured by the Independence Machine Co., of Independence, and has proven successful in its application to these small-production wells. This one-inch tubing can be renewed if necessary without disturbing the two-inch string, while the latter may rust out or go bad without interfering with the well's production. Just above the tubing packer, it is customary to insert a right and left collar and nipple for use in emergencies. This collar is greased well, tightened, and then backed off one turn. Ordinarily the packer can be pulled without damage.

Where the well is to be produced from two horizons, two packers are used, the lower one a tubing packer and the upper one a screw wall packer. Gas from the lower shale is taken out through the one-inch inserted tubing and the upper gas goes out through the two-inch but outside of the one-inch. A cage is inserted in the two-inch at top of upper pay.

The two-inch tubing ends in a stuffing box just above the casing head, from which the one-inch string rises and is turned into a separator, or so-called vertical drip, as shown on the accompanying drawing. It is a remarkable feature of shale gas that it separates entirely and immediately from the water which accompanies it to the surface. The vertical drip is made of 8 or 10-inch pipe and is eight feet long. All its connections are welded. At the point where the well flows into it, a small deflector is made by bending inward the segment cut out to receive the nipple.

Water Returned Into Well

The dry gas is blown out of the top of the vertical drip, while the water leaves through an outlet at the bottom. This water is conducted through a one-inch down pipe about 200 feet down into the well, providing about 80 pounds back pressure. In addition to performing a service in holding a back pressure on the well, this also is a convenient means of disposing of the water, which in most instances is absorbed in some of the porous beds through which the well has passed. In rare instances a well will not take care of the water, in which cases it is necessary to drain it away from the overflow at the casing-head. The water is extremely salty and therefore damaging to crops, but is always handled without difficulty. This is necessary in about one well out of every 10 drilled.

From the vertical drip the dry gas is conducted through a two-inch line into a line drip made of 6¼-inch junk pipe with welded connections. In cold weather the wells tend to send over a slight spray of water with the gas out of the vertical drip, all of which is caught in the line drip before the gas enters the service line. A test nipple and a blowoff are provided in the line drip. There is also a blow off nipple at the upper end of the one-inch tubing. In case of stoppage of the service line, the well will not log down from excess water because it will continue to function through the down pipe, resuming its ordinary course when service line is opened again.

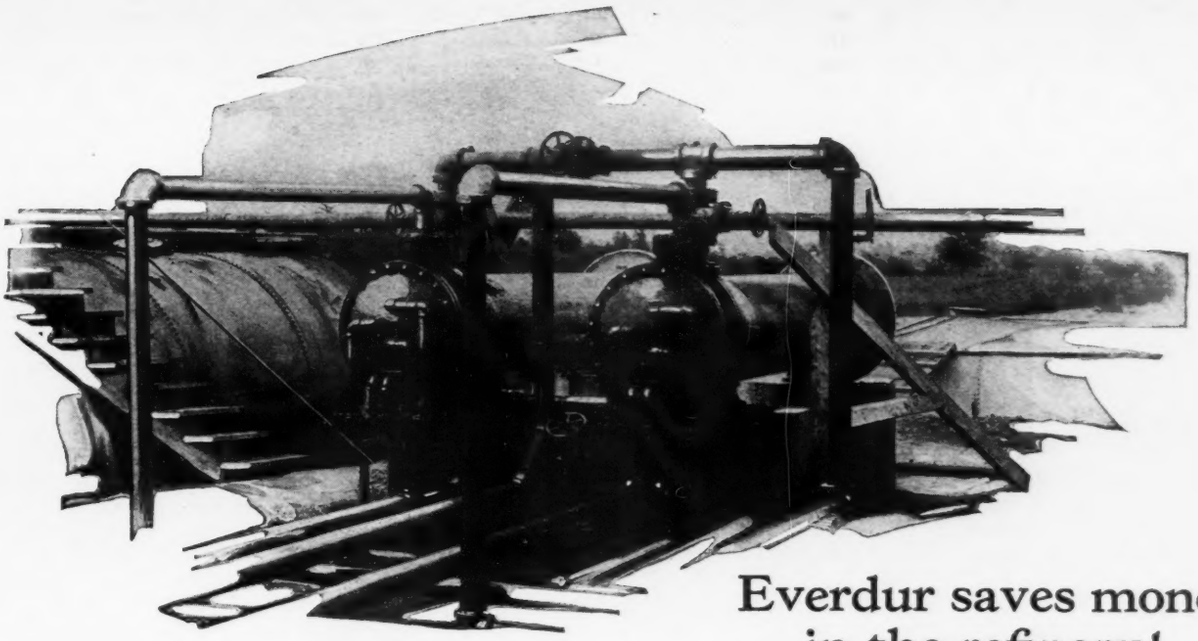
Little Operating Trouble

Wells hooked up in this manner require very little attention and continue their production in a remarkably steady manner. They appear to operate best when the service line pressure is about 20 pounds, but in a great many cases are operating against pressures running from 75 to 100 pounds. When pressure rises above 50 pounds the well is retarded in production. A recording meter at which we looked near one of the wells showed a pressure of 78 pounds and had been higher than that earlier in the day.

In many cases wells drilled into the shale will show neither gas nor water, but after having been tubed and swabbed for several days will begin to produce and will then continue on production. These are usually small wells. It is estimated that less than 10 per cent of the wells drilled have been absolute failures. A remarkable feature of the wells is that they invariably increase their production steadily for several weeks after completion before finally settling on their permanent course.

When drilled by contract, the average cost of completing a shale gas well is $1.30 a foot, complete with all fittings, drips and connections. Thus a well 600 feet deep can be put on production for $780.00, in round numbers. Operators figure that if a well pays out in a year to a year and a half it is a good investment, on account of its long life and steady production. In calculating the time in which a well pays out, it is charged, of course, with its share of the cost of dry holes or unprofitably small wells drilled by the operator. The 10-inch by eight-foot vertical drips cost $23.00 complete, while the eight inch by eight foot size costs $18.00. The line drips are still less expensive as they are made of old junk pipe for the most part.

Most of the individual shale gas operators are drilling contractors who have found it a profitable use to which to put their tools and who are usually



Everdur saves money in the refinery!

"I consider my problem of combating corrosion the most serious one confronting industry today, because in its various forms corrosion destroys more wealth in a year than the total cost of the late world war."

RECENT investigation has indicated that many of the large losses in refinery equipment due to corrosion may be reduced by building of Everdur.

This remarkable metal is not only highly resistant to some types of corrosion; but in addition its strength is comparable with that of steel; it can be cast, forged, welded, brazed as easily as bronze; rolled, drawn and formed as easily as steel.

When oil refinery equipment is built of Everdur, a double economy is effected—replacement costs of labor and material are reduced; and shut-downs for repairs are minimized.

Write for detailed information concerning Everdur.

DU PONT EVERDUR COMPANY
INCORPORATED
Wilmington Delaware

HORACE T. POTTS & COMPANY
Distributors, Philadelphia District

DU PONT

Everdur is being adopted by progressive oil refineries for:

Pumps
Valves
Pipe
Tanks
Meters
Condensers
Barrels and drums
Delivery cans, etc.

Various manufacturers of plant equipment have selected Everdur for use in machinery subject to corrosive conditions.

Everdur can at present be obtained in the form of ingots, billets, sheets, rods, tubes, wire, bolts and nails. Prompt deliveries can be made from stock. For freedom from shut-downs; for lower costs and greater profits—insist on Everdur.

DU PONT
TRADE MARK EVERDUR REG. U.S. PAT. OFF.
DU PONT EVERDUR METAL No 50
NON-CORROSIVE
METAL

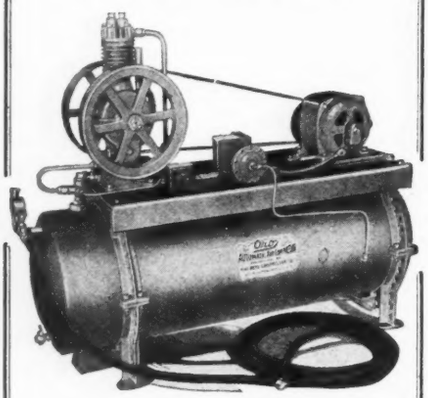
Patented in U. S. A., May 26, 1925
Patents in Foreign Countries Applied For

Oro
GOOD AS GOLD

Air Compressors

for

GASOLINE FILLING STATION SERVICE



Model E-68
½ H.P. Single-Stage

A trial order has convinced many oil companies that ORO Air Compressors are really superior for filling station service.

The ORO line is complete and you can get the exact size and style to fit any location.

For busy stations using air operated pumps there is the Model J-98 with a 1½ H. P. Motor on a 76 gallon tank which will easily take care of 3000 gallons a day and also take care of an average amount of tire inflation.

For the small Highway station requiring air for tire inflation only, there is the Model E-63 with a ¼ H. P. Motor on a 16 gallon tank which will provide your customers with the same high grade service but at considerable saving to you.

Between these **two models are some** 10 or 12 other sizes, and yes, we make some two or three sizes even larger than the J-98

A trial order is the ideal sale argument for ORO compressors. It's easy enough to use adjectives, but actual operation soon tells the tale.

Write for catalog and discount.

Manufactured by

The Auto Compressor Company

WILMINGTON, OHIO

Makers of air compressors since 1909

Please send me literature and prices on ORO Air Compressors.

Horse-Power ☐
Two Stage ☐ Single Stage ☐

Name .....

Address .....

able to finance such operations without difficulty. They undoubtedly can complete a well more cheaply than can the operator who has his drilling done by contract, but figures as to their costs are not available.

Past Year Active One

The first shale gas operations were undertaken around Cherryvale about seven years ago, but the idea did not spread into other districts until less than two years ago. The past year has seen the greatest activity in drilling new wells since the development started. The Cherryvale district now has about 150 wells, owned mostly by small operators, and producing five million cubic feet of gas daily. The shale gas development has been carefully nurtured by the Edgar Zinc Co., of Cherryvale, a branch of the U. S. Steel Corp., which is buying the entire output. The prices range from 10½ to 12 cents a thousand feet, according to quantity delivered. A delivery of 300,000 cubic feet or more per day for 30 days earns the highest price, which thence goes downward on a sliding scale for lesser deliveries.

Around Chanute, the Ash Grove cement plant is starting in to duplicate the work of the Cherryvale smelter in encouraging shale gas development and has recently laid an extensive pipe line system to the southwest some 15 miles. Chanute operators now have about 15 strings of tools running on this project of procuring the additional fuel supplies for the cement company. They are offering 10 cents a thousand feet at the meter, the operator piping the gas from wells to meter.

The Union Gas & Fuel Co. of Independence has an extensive pipe line system penetrating the nearby shale gas area and has built an extension north to Burlington, about 54 miles north of Neodesha. This company is paying eight cents a thousand for gas at the well.

One company, the Buffalo brick plant, tried to develop a shale gas field on its own, drilling its own wells, but unfortunately picked out a lean spot. After having drilled 45 wells, it had production that was not profitable. This is the only instance in which shale gas operations have resulted in failure. Coffeyville operators have developed a good supply of shale gas near that city and near Liberty and have a half dozen pipe lines radiating into the areas and buying the gas.

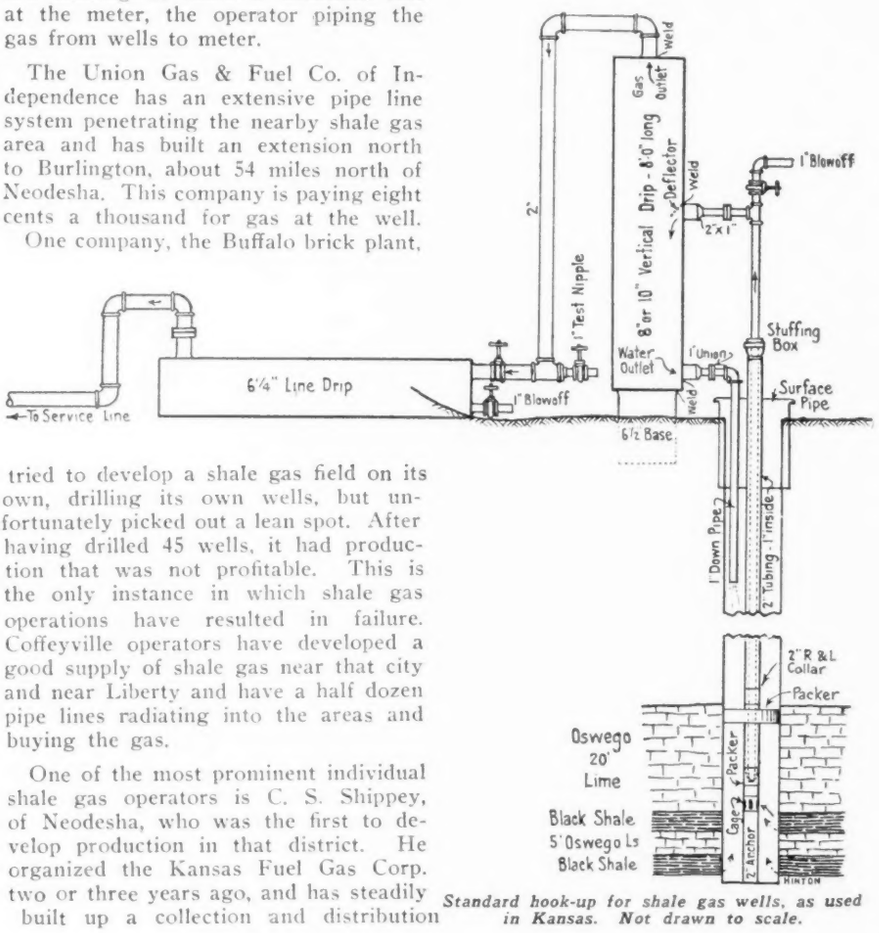
One of the most prominent individual shale gas operators is C. S. Shippey, of Neodesha, who was the first to develop production in that district. He organized the Kansas Fuel Gas Corp. two or three years ago, and has steadily built up a collection and distribution system. Today he is delivering about 3½ million feet of gas from 100 wells. He is selling a large portion of this to the Standard Oil Co. of Kansas for use in its refinery at Neodesha.

Following Shippey's success, executives and employes of the Standard's Neodesha refinery organized the Wilco Gas Co., and have built up a large production. At present they are delivering about 3 million feet of shale gas from 75 wells, at a 15-cent market, most of it going to the refinery.

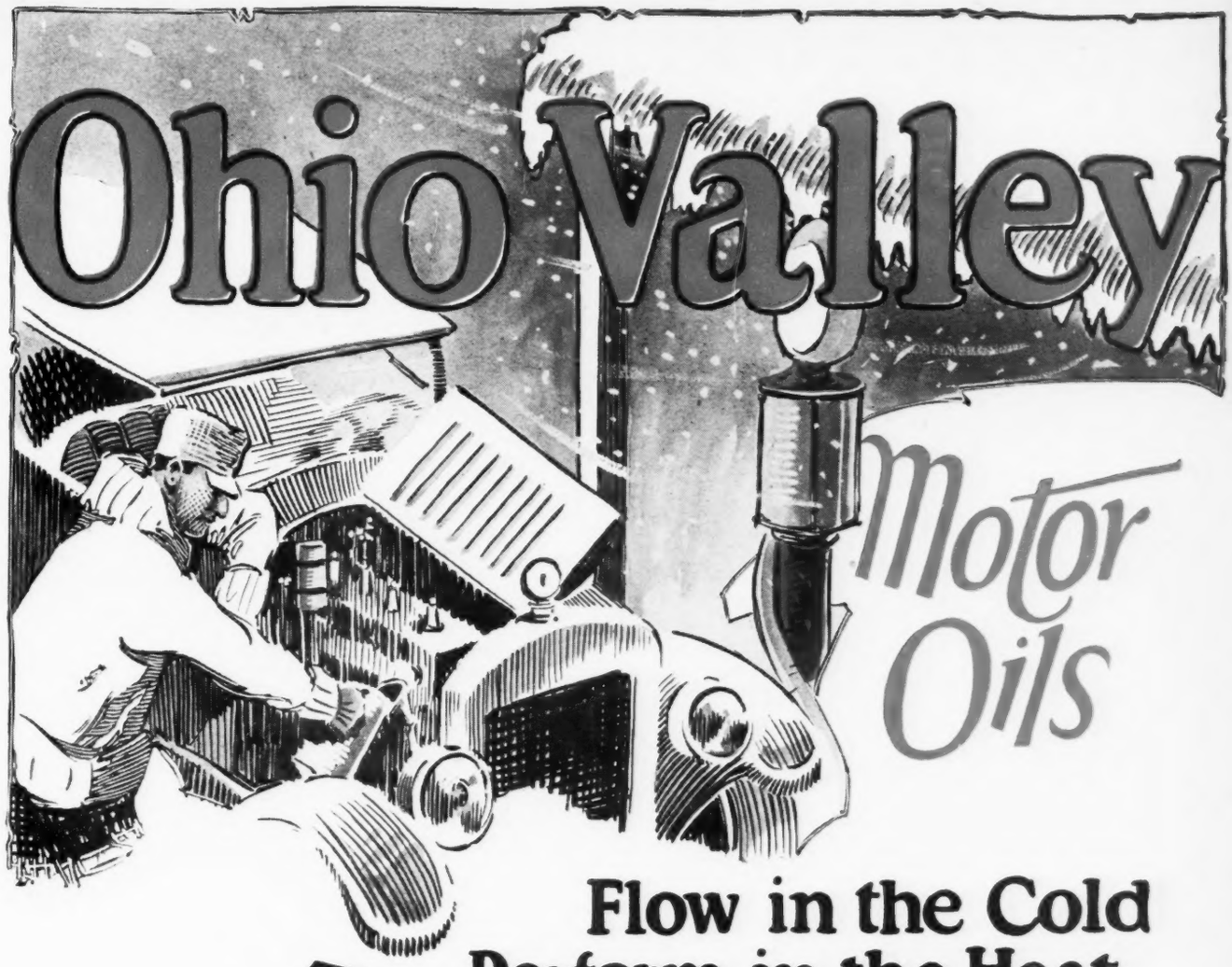
Thomas M. Galey, of Independence, has operated in shale gas from that city north as far as Humboldt, and has been active principally around Altoona, in which district he has the largest individual production. He states that the presence of this long-lived and reliable fuel supply presents an excellent opportunity for the establishment of glass plants, clay products plants, smelters, and brick plants, and that the shale gas industry could be expanded greatly if more market outlets could be secured.

Prairie Drills Some Wells

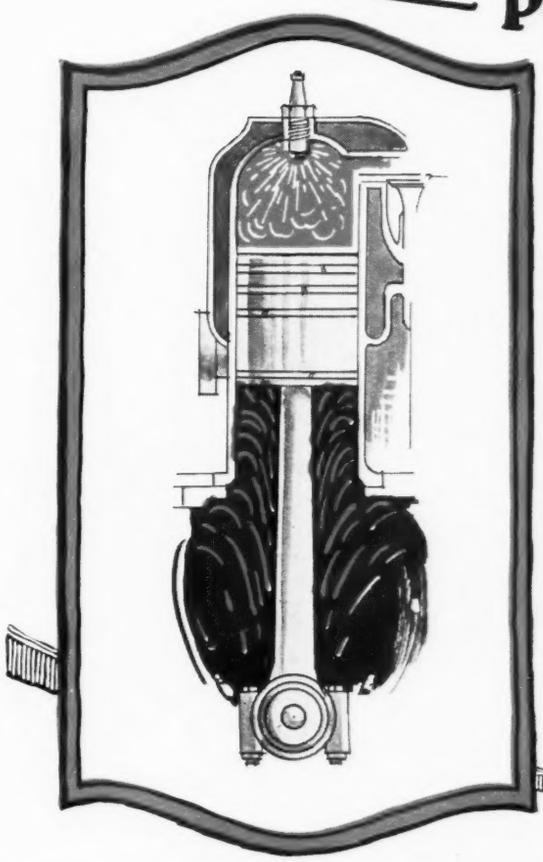
Although most of the shale gas drilling has been done by smaller concerns, the Prairie Oil & Gas Co. itself has been forced into the business by necessity of drilling offsets and now has about six shale gas wells. These wells are located in section 33-30-16, just south and east of Neodesha, on the famous C. W. Long 99-year oil lease, possibly the only lease of its kind in the oil industry. This old lease already has been



Standard hook-up for shale gas wells, as used in Kansas. Not drawn to scale.



Flow in the Cold — Perform in the Heat



When the snow flies and the icicles hang from the station roof, what kind of oils do your customers get—oils made to stand cold? Or oils that you know will stand the terrific, tearing heat of hard working cylinder walls and pistons?

Ohio Valley Motor Oils are satisfaction builders through the hardest winter days. Refined by most modern methods from the finest of Pennsylvania, they will not only flow when the thermometer drops to fifteen but they'll hold their unusual lubricating qualities through any test—even the long low-gear pulls that winter always brings.

Get complete information about Ohio Valley Oils for your customers. Get samples, specifications, prices. Write, phone or wire.

Ohio Valley Refining Company
St. Marys, W. Va.

Brilliant, Cheerful Trade-getter

Your service message built into a Flexlume electric sign is far-reaching and most effective any or all hours of the twenty-four.

If you operate a number of stations, put Flexlume to the test at one of them. Prove its power to increase your business and profit before standardizing on Flexlume. Write for literature showing gas station installations and complete information.

We also build exposed lamp and other types of electric signs for those who prefer or require them.

FLEXLUME CORPORATION
1120 Military Road **Buffalo, N. Y.**
Phone "Flexlume" — All Principal Cities
Factories also at Detroit, Los Angeles, Oakland, Calif. and Toronto, Canada

FLEXLUME CORPORATION

JUST AS EFFECTIVE BY DAY

Oil Jobbers!

Ask about our prices; request samples any grade **GREASE** made in our plant.

It will pay you to investigate our proposition for furnishing **GREASE** in cans **LITHOGRAPHED** your **NAME** and **BRAND.**

Capitalize your own identity.

YOUR name and brand on grease cans will help sell more grease to your friends and customers.

We render a complete service to the legitimate oil jobber.

Ask for Jobbers' list oils; 100% Penna. included [*Permit No. 301*]

COLUMBIA OIL COMPANY, INC.
ST. LOUIS, MO.

E. J. Keitel, President, and F. L. Kuhlman Gen'l Mgr. will be registered at the Brown Hotel, Louisville, Ky., during the National Petroleum Marketers Association Convention.

producing for one-third of its life, having been first drilled during the early days by Guffey & Galey. It was sold by them to the Forest Oil Co., which was the predecessors of the Prairie. The Galey of that combination was Thomas M. Galey's uncle, John.

Shale gas has been a life saver in the old Chanute field, where operations for some time have been hampered by a lack of fuel. Many wells in this district now on production would have had to be abandoned had it not been for the development of shale gas. Chanute operators are now making shale gas wells from old abandoned holes and are finding it highly profitable to do so as the gas was badly needed. Nowadays when the casing goes bad in one of these old wells, where production has fallen so low that it would not be profitable to rehabilitate the well, it is not altogether abandoned, but is equipped with the standard hook-up and converted into a shale gas well. The old casing is pulled and sold for what it will bring to help defray the expense of the conversion.

Shale gas is known to exist in Osage county, Okla., and in northeastern Oklahoma as far south as Tulsa, but so far has been a neglected resource in those localities. It is also an unused commodity in other places where it is to be found, such as California, Wyoming, and Colorado. At any rate, Kansas is one place where they have succeeded in trailing the Will-o-the-Wisp to its lair and put it to work for man and civilization.

Suggestion for Burner Dealers

ST. LOUIS, MO.—A suggestion to dealers who sell kerosene to users of kerosene heaters, such as the Oliver, the International, Uniheat, and so on, is made by Otto W. Koch, manager of O. K. Products Co. of this city.

Mr. Koch states that dealers should explain to their customers that the coil-like oil heaters of the above-named types cannot be screwed down like a gas stove. The flame must be kept burning full, but need not be on full force. To turn them down, causes them to smoke and carbonize. Mr. Koch reports that he has used one of the above makes of burner for three years and it still works well. When too hot, the burner should be turned off and then lit over again.

Cosden Sales Executive Quits

CHICAGO, Nov. 9.—A. F. Hickey, assistant sales manager of the Cosden Sales Corp. since its organization, has resigned. He has not, however, made public his plans for the future. For four years he held a similar position with Taxman Refining Co. when it was the Cosden Co.'s marketing outlet. For five years he was with Johnson Oil Refining Co., Chicago, and was a refinery man of experience in the eastern fields before that.

HERE AND THERE

F. S. Crowell, zone representative No. 5 in the El Paso, Tex., district for The Texas Co., is reported to be so busy these days putting on motor oil demonstrations and erecting signs for his new customers, that he can find no time to kill a few quail or a duck or two. He reports business picking up in gratifying manner in his entire territory.

* * *

C. A. Cheney, geologist at Tulsa, has returned from a trip to Canada, during which he inspected mining properties in the Lake Nipigon region. He reports the 4.4 per cent a disappointment, for the benefit of the rest of the oil fraternity who might be casting longing looks in a northerly direction.

* * *

W. E. Smith, vice president of the Standard Oil Co. of Kentucky, Louisville, returned to his desk on Oct. 5 after an illness of five months. Mr. Smith was in Atlantic City for eight weeks and the rest of the time of his illness in New York City. He was suffering from flu and malaria fever.

* * *

Gus Shone, until recently special agent for the Standard Oil Co. of California at Willows, Calif., has been promoted to Gridley, Calif., and is very optimistic over business conditions in that territory, according to Tom Irving, Jr., with the Standard at Princeton, Calif.

* * *

H. M. Stalcup, vice president of the Skelly Oil Co., Tulsa, says that no end of good is resulting from the petroleum exposition through the superintendents and foremen who visited the exposition, reports J. S. Freeman, assistant to Mr. Stalcup.

* * *

"Bob" Lawe, formerly at the Dallas offices of the Simms Oil Co., will open an agency for that company at Weatherford, Tex. This is Mr. Lawe's old home, according to T. C. Orr, agent at Corsicana for the Simms Oil Co.

* * *

James Crawford, pipe line manager for the Stoll Oil Refining Co., Louisville, Ky., recently visited Glasgow, according to J. A. McAuley, manager of the Glasgow Oil & Refining Co.

* * *

Boyde Cornelison, of the Lewiston Oil Co., Lewiston, Idaho, and Mrs. Cornelison, vacationed recently at Payette Lakes, Idaho, according to S. C. Skillem, manager.

* * *

John T. Robbins, of Robbins Bros., Athens, Tex., recently returned from a two weeks' vacation on the Pacific coast, where he spent his time fishing and hunting.

Hugh Bonham, district manager, and R. C. Cathcart, superintendent of sales for the El Paso district of The Texas Co., recently made a business trip to Douglas, Ariz., district offices. They made the trip in a new Packard coach and report the roads in fair shape. They also report passing many tourists, according to S. R. Ruebush, agent at Deming, N. Mex., for The Texas Co.

* * *

L. I. Warren, manager of the state of Delaware division of the Crew Levick Co., at Wilmington, Del., has returned from Rehoboth Beach, Del., where his company supplied gasoline and oils to the Delaware National Guard trucks during its annual military training encampment.

* * *

I. L. Klein, chief chemist for the Sun Oil Co., at Toledo, O., spent his vacation among his old haunts at the Imperial Oil, Ltd., offices at Sarnia, Ont. Mr. Klein also visited New York, Atlantic City and other eastern points, according to D. R. Miley, assistant chemist.

* * *

A. W. Wilson, special agent at Camden, Ark., for The Texas Co., who is better known as "Doctor," has returned from his vacation. Gus Shanks, lubrication engineer, and L. M. Benser, Jr., agent at Dermott, Ark., spent their vacations together.

* * *

V. H. Smith, vice-president of the Lion Oil & Refining Co., El Dorado, Ark., returned recently to the office after spending two months in Canada and Washington, accompanied by Mrs. Smith and daughter, Beverly.

* * *

R. C. Chambers, Pittsburgh, Pa., is spending some time at the Coleman properties in the Big Lake, Tex., field, according to A. G. Beach, agent for The Texas Co. at Coleman, Tex.

* * *

Edward C. Freiling, secretary and treasurer of the Mutual Gasoline & Oil Corp., Rochester, N. Y., is spending his vacation by motoring to Missouri and several other western states.

* * *

H. F. Brownell, president of the Brownell Corp., Sioux Falls, S. D., and family returned home the latter part of August from a six weeks' trip to the Pacific coast and Canada.

* * *

F. M. Devin, of the Mt. Vernon, O., offices of the C. & G. Cooper Co., was in the Mid-Continent field, recently, renewing friendships, and also attending the Tulsa exposition.

C. L. Royer, manager for the Johnson Oil Refining Co., Toledo, O., accompanied by Mrs. Royer, motored through the New England states recently to become acquainted with the latest ideas in service station management. F. E. Anderson took charge of the business during Mr. Boyer's absence, according to J. Gutting, secretary.

* * *

John Lau, who has been sales manager in the Mason City, Ia. division of the Standard Oil Co. of Indiana, has been transferred to the Davenport division as assistant manager, according to Louis E. Triebsch, agent at Alden, Ia. for the Standard.

* * *

Craig Geddis, Houston, Tex., has resigned from the American Seamless Tube Corp., and will in the future devote all his time to selling products of the Monongahela Tube Co. and the Superior Tube Co. He will maintain his offices in the West Bldg., at Houston.

* * *

Otto W. Koch, manager of the O. K. Products Co., St. Louis, Mo., distributor of Marland Products, has returned from a four weeks' visit to the oil fields and the Marlanod plants in Oklahoma and Texas.

* * *

G. R. Gould, assistant to P. W. Zumbrook, bulk sales representative in the central district of the Sinclair Refining Co., with headquarters at Chicago has left the company to enter the University of Chicago.

* * *

Norman E. Carter, president of the Plaza Oil Co., Indianapolis, Ind., recently returned from the A. O. M. A. convention at Chicago, where he completed several oil contracts, reports R. H. Daugherty, general manager.

* * *

E. G. Plarson, who has been general salesman in the Orlando, Fla., territory for the Standard Oil Co. of Kentucky, has been transferred to Jacksonville, where he became city manager for the company.

* * *

George A. Burke, who is with the Standard Oil Co. of Ohio, Cleveland, recently spent two days in Louisville as a guest of W. E. Smith, vice president of the Standard Oil Co. of Kentucky.

* * *

William A. Stoll, treasurer of the Stoll Oil Refining Co., Louisville, Ky., has been elected president of the Young Business Men's League of Louisville at its meeting on Oct. 9 at the Kentucky Hotel.

LAKE

PETROLEUM PRODUCTS

THERE is a higher ideal behind our organization than the selling of petroleum products.

Primarily, it is our object to supply jobbers with their various requirements at prices consistent with high quality, which make our customers substantial profits. But our interest does not cease with our shipments. Back of our orders are ample sources of supply, together with our full guarantees of uniformity, dependable quality and prompt delivery. Furthermore, we act as your field representatives in matters pertaining to industry developments, being in close touch with all phases of the petroleum business—production, refining and marketing.

We cordially solicit your inquiries and assure you of prompt personal attention to your needs.

Gasoline
Lubricating Oils
Kerosene
Naptha
Paraffines
Distillates
Fuel Oils
Engine Oils

REFINERIES:
Lemont, Ill.
Augusta, Kans.

BRANCH OFFICES:
Minneapolis, Minn.
Kansas City, Mo.
Tulsa, Okla.
Omaha, Neb.

LAKE PETROLEUM COMPANY

WHOLESALE MARKETERS OF PETROLEUM PRODUCTS

208 South LaSalle Street
CHICAGO, ILLINOIS

New Oil Station Construction

Winchester, Va.—Dr. P. J. Landis, owner of the Winchester Gas & Oil Co., this city, will build several service stations during the coming year, in addition to the five now operated by his company. The company has just taken on the distribution of Havoline motor oil, made by the Indian Refining Co., reports Dan A. Evans, salesman for the Indian in this territory.

* * *

Amarillo, Tex.—Cal Farley, known as the A. E. F. champion welterweight wrestler, is building a filling station here, and will handle products of the Texhoma Oil & Refining Co., according to J. W. Adams, agent for the Texhoma here.

* * *

Morehead, Ky.—S. M. Bradley is building several service stations here along the Midland trail, and will install additional storage tanks for gasoline and oil in the near future.

* * *

Amarillo, Tex.—Cal Farley, known as the "A. E. F." champion welter-weight wrestler" is building a filling station to handle Texhoma Oil & Refining Co. products.

* * *

Louisville, Ky.—Stoll Oil Refining Co. erecting service station at Eastern Parkway and Flat Lock Rd.

Deyo Buys Stations of Cortland Co.

CORTLAND, N. Y.—Herbert R. Sargent, owner of the Cortland Specialty Co. of this city, has sold the physical properties of the company to the Deyo Oil Co., Inc., Binghamton, N. Y., distributor of Galtex gasoline. The Cortland company has been distributing products of The Texas Co. for several years, and operated bulk stations at Cortland, Marathon, Tully, Cazenova, Auburn, Seneca Falls, Geneva and Newark, N. Y. Delivery equipment consisted of 24 trucks.

Until Jan. 1 of this year, the Deyo company had been distributor of Texaco products, but at that time it took over the distribution of products of the Galena Signal Oil Co. of Texas. With its newly acquired properties, the Deyo company will own and operate 30 bulk stations.

Mr. Sargent has been retained by the Deyo company, for which he will act as general manager of the territory formerly covered by the Cortland company.

Save *the* Cost *of* Drain Pits *and* Racks

EQUIP for crankcase service with Brookins Portable Drain Tanks. They take the place of pits or racks at only a fractional part of the cost.

If you already have drain pits or racks, Brookins Portable Drain Tanks will help you take care of *more* customers—will make extra money for you when your pits or racks are busy.

Brookins Gasoline Can

Made in two and five gallon sizes. Flexible metal hose reaches any gasoline intake. Carries without spilling or splashing. Just the thing for taking gasoline to cars that cannot be brought to the pump.

Brookins Oil Measures will also help you sell more oil. They serve from one to five quarts of oil in one operation and easily reach hard-to-reach oil intakes *without wasting a drop of oil.*

Order Brookins Portable Drain Tanks and Brookins Measures from your jobber today.

The Brookins Mfg. Company,
342 Xenia Ave. Dayton, Ohio

The Brookins Portable Drain Tank

is 25 inches long, 11¼ inches wide, 4½ inches deep and holds about 4 gallons. Equipped with folding handle and steel runners. Can be drawn anywhere as easily as a sled or can be carried with one hand, even when full of liquid.

Brookins
SERVICE STATION EQUIPMENT

Brookins Oil Measure

Made in one, two, four and five quart sizes. Has a flexible metal hose that reaches any oil intake without a funnel. A handy thumb-valve controls the flow of oil.

Refinery Products Directory

Gasoline and Naphtha

ILLINOIS

58-60 U. S. Motor Gasoline
Indian Refining Company, Lawrenceville, Ill.
Shaffer Oil & Refg. Co., Chicago, Ill.

60-62 400 E. P. Gasoline
Shaffer Oil & Refg. Co., Chicago, Ill.

64-66 375 E. P. Gasoline
Shaffer Oil & Refg. Co., Chicago, Ill.

68-70 350-360 E. P. Gasoline
Shaffer Oil & Refg Co., Chicago, Ill

68-70 360-375 E. P. Gasoline
Shaffer Oil & Refg. Co., Chicago, Ill.

KANSAS

60-62 420-430 E. P. Gasoline
★Skelly Oil Co., El Dorado, Kansas

64-66 375 E. P. Gasoline
★Skelly Oil Co., El Dorado, Kansas

KENTUCKY

46-48 500 E. P. Naphtha
Great Southern Refining Co., Lexington, Ky.

50-52 450 E. P. Naphtha
Great Southern Refining Co., Lexington, Ky.

56-58 437 E. P. Gasoline
Great Southern Refining Co., Lexington, Ky.

58-60 Navy Gasoline
Great Southern Refining Co., Lexington, Ky.

58-60 Motor Gasoline
Great Southern Refining Co., Lexington, Ky.

64-66 400 E. P. Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.
Great Southern Refining Co., Lexington, Ky.

68-70 Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

58-60 U. S. Motor Gasoline
Caddo Central Oil & Refining Co., Shreveport, La.
Louisiana Oil Refg. Corp., Shreveport, La.
Shreveport Prod. & Refg. Co., Shreveport, La.

NORTH TEXAS

56-58 450 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

58-60 U. S. Motor Gasoline
Panhandle Refining Co., Wichita Falls, Tex.
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

58-60 450 E. P. Naphtha
Noble Oil & Gas Co., Tulsa, Okla.
Panhandle Refg. Co., Wichita Falls, Texas
Texhoma Oil & Refg. Co., Wichita Falls, Texas

60-62 400 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

64-66 390 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

64-66 375 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

68-70 350-360 E. P. Gasoline
Noble Oil & Gas Co., Tulsa, Okla.

OKLAHOMA

50-52 450 E. P. Naphtha
Cameron Refg. Co., Ardmore, Okla.

56-58 450 E. P. Gasoline
★Bolene Refg. Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.

58-60 450 E. P. Gasoline
★Bolene Refg. Co., Enid, Okla.

58-60 U. S. Motor Gasoline
★Bolene Refining Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.

60-62 400 E. P. Gasoline
Altitude Petroleum Co., Tulsa, Okla.

64-66 390 E. P. Gasoline
★Bolene Refg. Co., Enid, Okla.

68-70 350 E. P. Gasoline
Altitude Petroleum Co., Tulsa, Okla.

PENNSYLVANIA

50-52 Naphtha
Emery Mfg. Co., Bradford, Pa.

52-54 Naphtha
Lucinda Refining Co., Lucinda, Pa.

54-56 Naphtha
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

58-60 Gasoline
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Independent Refining Co., Oil City, Pa.

58-60 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

60-62 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

62-64 Straight-run Gasoline
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

64-66 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.

68-70 Straight-run Gasoline 350 E. P.
McKean County Refining Co., Bradford, Pa

68-70 Straight-run Gasoline 305-320 E. P.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

70-72 Straight-run Gasoline 300-305 E. P.
Emery Mfg. Co., Bradford, Pa.
Lucinda Refining Co., Lucinda, Pa.
★Waverly Oil Works Co., Pittsburgh, Pa.

68-70 Blend, 425-430 E. P.
★Continental Refining Co., Oil City, Pa.

Special Naphtha

OKLAHOMA

V. M. & P. Naphtha
Anderson Prichard Oil Corp., Oklahoma City, Okla.

Cleaners Naphtha
Anderson Prichard Oil Corp., Oklahoma City, Okla.

Rubber Solvent
Anderson Prichard Oil Corp., Oklahoma City, Okla.

Turpentine Substitute
Anderson Prichard Oil Corp., Oklahoma City, Okla.

PENNSYLVANIA

Turpentine Substitute
★Waverly Oil Works Co., Pittsburgh, Pa.

Refineries all over the country are listed according to the products they are making today, or that they have in stock, or will make on reasonable demand.

Refineries shut down for any length of time and whose stocks of products are exhausted, are eliminated so far as possible.

It is requested, in justice to all, that all inquiries by telephone and telegraph be prepaid and this is recommended by the oil associations.

Methods of testing, approved by oil and scientific associations and the U. S. Bureau of Standards, are used. Grades of products listed, as well as names of refineries are revised each week.

Any marketers appearing in these columns are exclusive sales agents by contract with or ownership of refineries and the products listed after them are those made by those refineries.

Natural Gasoline

NORTH TEXAS

Natural Gasoline—Blends

60-62 450 E. P.
Noble Oil & Gas Co., Tulsa, Okla.

OKLAHOMA

Grade A
Altitude Petroleum Co., Tulsa, Okla.

Burning Oils

KENTUCKY

43-44 Water White Kerosene
Great Southern Refining Co., Lexington, Ky

43-45 Water White Kerosene
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

41-43 Water White Kerosene
Caddo Central Oil & Refining Co., Shreveport, La
Louisiana Oil Refg. Corp., Shreveport, La.

NORTH TEXAS

41-43 Water White Kerosene
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

OKLAHOMA

41-43 Water White Kerosene
Cameron Refg. Co., Ardmore, Okla.

42-44 Water White Kerosene
Altitude Petroleum Co., Tulsa, Okla.

44-46 Water White Kerosene
Anderson-Prichard Oil Corp., Oklahoma City Okla.

PENNSYLVANIA

45 Water White Kerosene
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
★Empire Oil & Grease Co., Inc., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.
Mutual Refg. Co., Warren, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

46 Water White Kerosene
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
Mutual Refg. Co., Warren, Pa.

47 Water White Kerosene
★Empire Oil & Grease Co., Inc., Oil City, Pa.

Neutral Oils

ILLINOIS

180 Vis. No. 3-3½ Asso. Filt.
★Indian Refining Company, Lawrenceville, Ill.

180 Vis. No. 5 Asso. Filt.
★Indian Refining Company, Lawrenceville, Ill.

PENNSYLVANIA

150 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.

150 Vis. No. 4½ Filt. (Red)
Crystal Oil Works, Oil City, Pa.

180 Vis. No. 3 Asso. Filt.
Carnegie Refining Co., Carnegie, Pa.
Emery Mfg. Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.

200 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refining Co., Carnegie, Pa.
Emery Mfg. Co., Bradford, Pa.
★Empire Oil & Grease Co., Inc., Oil City, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.

34 Gravity 350-360 Flash
Pennsylvania Oil Products Refg. Co., Warren, Pa.

Cylinder Oils

PENNSYLVANIA

600 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Crystal Oil Works, Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
Lucinda Refining Co., Lucinda, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

635 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.

650 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
McKean County Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.

600 Flash Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
★Waverly Oil Works, Pittsburgh, Pa.

620-630 Flash Steam Refined
McKean County Refining Co., Bradford, Pa.
★Waverly Oil Works, Pittsburgh, Pa.

600 Warren E
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refining Co., Carnegie, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

600 Oil City E
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
Independent Refining Co., Oil City, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

600 Filtered D
Butler County Oil Refg. Co., Bruin, Pa.

Cold Test Stock (bright filtered)
Carnegie Refg. Co., Carnegie, Pa.
Kendall Refining Co., Bradford, Pa.
Mutual Refg. Co., Warren, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa
Warr-Penn Refining Co., Warren, Pa.

Cold Test Stock (dark filtered)
Carnegie Refg. Co., Carnegie, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Warr-Penn Refining Co., Warren, Pa.

Black Oil
Emery Mfg. Co., Bradford, Pa.

Wax Oil
Lucinda Refining Co., Lucinda, Pa.

Motor Oils

ILLINOIS

Indian Refining Company, Lawrenceville, Ill

PENNSYLVANIA—100% PURE

Butler County Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
★Empire Oil & Grease Co., Inc., Oil City, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.
★Waverly Oil Works Co., Pittsburgh, Pa.

Greases and Soap

Auto Soap
Damascus Mfg. Corp., Cleveland, O.
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Stevens Grease & Oil Co., Cleveland, O.

Axle Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

Chatterless Oil Base
Damascus Mfg. Corp., Cleveland, O.
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
★Waverly Oil Works Co., Pittsburgh, Pa.

Cup Grease
★Columbia Oil Co., 3419 Papin St., St. Louis, Mo.
Richardson Lubricating Co., Quincy, Ill.
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

Cutting Compounds
Damascus Mfg. Co., Cleveland, O.
Stevens Grease & Oil Co., Cleveland, O.

Gear Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo

Mill Grease
Stevens Grease & Oil Co., Cleveland, O.

Mine Car Lubricants
Stevens Grease & Oil Co., Cleveland, O.

Pressure Gun Grease
★Columbia Oil Co., 3419 Papin St., St. Louis, Mo.
Fiske Bros. Ref. Co., 24 State St., New York, N.Y.
Branch 215 Pontiac St., Toledo, Ohio
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Stevens Grease & Oil Co., Cleveland, O.

Soluble Oils & Base
Damascus Mfg. Corp., Cleveland, O.
Stevens Grease & Oil Co., Cleveland, O.

Sponge Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

Transmission & Differential Grease
Capstone Mfg. Co., Plum Pt. Lane, Newark, N.J.
★Columbia Oil Co., 3419 Papin St., St. Louis, Mo.
Damascus Mfg. Corp., Cleveland, O.
Fiske Bros. Ref. Co., 24 State St., New York, N.Y.
Branch 215 Pontiac St., Toledo, O.
Stevens Grease & Oil Co., Cleveland, O.

Universal Joint Grease
Stevens Grease & Oil Co., Cleveland, O.

Wax Distillate

PENNSYLVANIA

34-34½ Gravity
Bradford Oil Refg. Co., Bradford, Pa.

Wax

ILLINOIS

124-126 White Crude Scale
★Indian Refining Company, Lawrenceville, Ill.

Those companies marked with a star are using regular display advertising space in National Petroleum News.

PENNSYLVANIA

122-124 White Crude Scale
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

124-126 Crude Scale (off white)
Crystal Oil Works, Oil City, Pa.

128-130 Refined
★Waverly Oil Works Co., Pittsburgh, Pa.

Fuel Oil

KENTUCKY

24-26 Fuel Oil
Great Southern Refining Co., Lexington, Ky.
Nashville Oil Co., Nashville, Tenn.

26-30 Fuel Oil
Nashville Oil Co., Nashville, Tenn.

30-32 Fuel Oil
Ashland Refining Co., Ashland, Ky.

34-38 Gas Oil (light)
Great Southern Refining Co., Lexington, Ky.

34-38 Gas Oil (dark)
Great Southern Refining Co., Lexington, Ky.

38-40 Distillate (light)
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

14-18 Fuel Oil
Caddo Central Oil & Refining Co., Shreveport, La.

18-22 Fuel Oil
Louisiana Oil Refg. Corp., Shreveport, La.

32-36 Gas Oil
Caddo Central Oil & Refining Co., Shreveport, La
Louisiana Oil Refg. Corp., Shreveport, La.

NORTH TEXAS

24-26 Fuel Oil
Sunshine Consolidated Oil Co. Wichita Falls, Tex.

34-38 Gas Oil (dark)
Texhoma Oil & Refg. Co., Wichita Falls, Tex.

38-40 Distillate—Prime White
Noble Oil & Gas Co., Tulsa, Okla.

OKLAHOMA

26-30 Fuel Oil
★Bolene Refining Co., Enid, Okla.

30-32 Fuel Oil
★Bolene Refining Co., Enid, Okla.

32-36 Gas Oil
★Bolene Refining Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.
★Roxana Petroleum Corp., St. Louis, Mo.

24-26 Zero Fuel Oil
Altitude Petroleum Co., Tulsa, Okla.

34-38 Straw Distillate
Cameron Refg. Co., Ardmore, Okla.

38-40 Straw Distillate
★Bolene Refining Co., Enid, Okla.

PENNSYLVANIA

30-34 Fuel Oil
Butler County Oil Refg. Co., Bruin, Pa.
Mutual Refg. Co., Warren, Pa.

36-40 Fuel Oil
Bradford Oil Refg. Co., Bradford, Pa.
Carnegie Refg. Co., Carnegie, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

Petroleum Coke

Kendall Oil Refining Co., Bradford, Pa.
Shaffer Oil & Refg. Co., Chicago, Ill.
Shreveport Prod. & Refg. Co., Shreveport, La.

SPECIFICATIONS

TANK—Steel welded, 12 in. Dia.; 27 in. high; Cap. 100 lbs.
WHEELS—10 in. Diameter.
BASE—Steel Plate.
HOSE—5 feet Flexible combination.
WEIGHT—60 lbs.

SPECIFICATIONS

TANK—12 in. Dia. 27 in high; Cap. 10 gals.
WHEELS—10 in. or 15 in. Dia.; Specify size wanted.
PUMP—1 Pint each Stroke.
HOSE—5 ft. Flex. Combination.
WEIGHT—70 lbs.

SPECIFICATIONS

TANK—12 in. Dia., 27 in. high; Cap. 10 Gallons.
WHEELS—15 in. Diameter.
PUMP—1 Pint each Stroke.
HOSE—5 ft. Flexible Combination.
WEIGHT—70 lbs.
All equipped with or without meter for registering total output.

—Louisville

during the

National Petroleum Marketers Association Convention

November 17-18-19

See the Royway Portable Grease, Oil and Alcohol Servers on display and in action.

Today, more than 45 National Operators use Royway Products; among them—the Standard Oil Co. of N. Y., Gulf Refining Co., the Texas Co., etc., etc.—guarantee enough.

—Single action pumps.

—Automatic shut-off valve in nozzle.

—Accurate measure.

—Easily filled tank.

You'll find the Royway Portables a highly profitable way to handle grease, oil and alcohol.

Sealed Nationally

Roy Sales Co., Inc.

50 Church St. New York, N. Y.

Industrial Catalogues

Paints suitable for preventing or retarding rust and corrosion, paint formulated and manufactured to withstand the action of fumes, acids and alkalies—in fact paints for every use for which paints are required by the oil industry are discussed in a booklet entitled "Principles of Upkeep Painting for the Petroleum Industry," just issued by the E. I. du Pont de Nemours & Co., Wilmington, Del.

Methods of preparing for painting surfaces of different materials, including concrete construction, are discussed and rules laid down for the application of various kinds of paint to get the best results. The appropriate du Pont product for each use is recommended in the book and a supplement carries numerous color cards showing the shades of each paint for each purpose put out by the du Pont company's paint and varnish division.

It is stated that the data in the book offered is a most intensive and thorough study by the company's research department of the peculiar needs of the oil industry in regard to paint in all phases of the business.

Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

17500.—**Lubricating oils,** 152,000 kilos, Montevideo, Uruguay, purchase.

17516.—**Crude oil in cargo lots, and refined oils,** Vienna, Austria, agency.

17552.—**Paraffin candles,** Amoy, China, purchase.

17553.—**Paraffin** for candles, Orense, Spain, purchase.

17554.—**Lubricating oils,** Montevideo, Uruguay, purchase.

17555.—**Lubricating oils** for textile mills, Bombay, India, purchase.

17556.—**Kerosene, gasoline, and lubricating oils,** Montevideo, Uruguay, purchase or agency.

17597.—**Paraffin wax and pitch,** Caracas, Venezuela, purchase.

WASHINGTON, — The U. S. Geological Survey has published, for free distribution, preliminary topographic sheets on the following Oklahoma quadrangles: Minco, Hennessey, Norman, Stillwater, northwest part of Prague, Seminole and Prague, Edmond, Guthrie, Moore, Buggy Creek, Mulhall, Sheridan.

SCOUTING The LOBBIES

R. S. Ellison

WHEN the accompanying picture of the shirt-sleeved gentlemen was snapped, quite a crowd was assembled before him. The occasion was a trip by the oil division of the American Institute of Mining & Metallurgical Engineers last August from Casper, Wyo., to Independence Rock, a huge granite mass in Wyoming that is quite famous in the annals of early emigration.

It was considered fitting that the guests should be told some of this pioneer history and but one person came to mind when the program committee planned to have it told. Robert S. Ellison was the first and last choice.

Most every oil man has some form of recreation to which he devotes himself in his non-working hours as earnestly as he does to business. Mr. Ellison's is the patient assembling and study of data and relics bearing upon the settlement of the great northwest. He will pursue a fact for months with more patience than the average professional historian exercises, which is one reason why those who know the Ellison collection of early Americana say he could compile a more authentic history of Wyoming—and perhaps other northwestern states—than any that have been so far written.

Mr. Ellison's reputation in historical research does not, however, dwarf his reputation as an oil man. He is vice-president of the Midwest Refining Co., in charge of the operating offices at Casper, and has passed upon the multitudinous details connected with the development of Salt Creek and other Rocky Mountain fields. He is an attorney by training, but it has been many years since he went into a court room to plead a suit.

Mr. Ellison is always glad to see the visitor who can discuss intelligently the operating or economic problems of the oil industry. If the visitor wishes to establish himself forever in the Ellison affections, however, let him mention that he has found some proof that there is in the possession of a sheepherder in Wyoming, an unpublished journal of the Lewis & Clark expedition, or anything of that general nature. The visitor had better have some proof, though and know what he is talking about.

LATE in 1923, Frederick G. Clapp, consulting geologist, of New York, accepted an assignment to Australia to investigate the oil and gas possibilities of certain areas in the far northwest of that continent. He expected to spend about five months at this work. Now, nearly two years later, he has returned to his New York offices.

His principal objective was the great Desert Basin of western Australia, which had already been reported on favorably by geologists of local companies. About a year ago he published in these columns his conclusions on this region. He reported that western Australia has little chance of finding oil. Areas the size of Oklahoma and Texas, which had been favorably considered, were condemned by him. Victoria, which had been boosted considerably, was also condemned, as was South Australia. The Northern Territory, although not visited by Clapp, was condemned on the basis of antiquity of strata, metamorphic conditions, etc., reported by geologic reconnaissances to date.

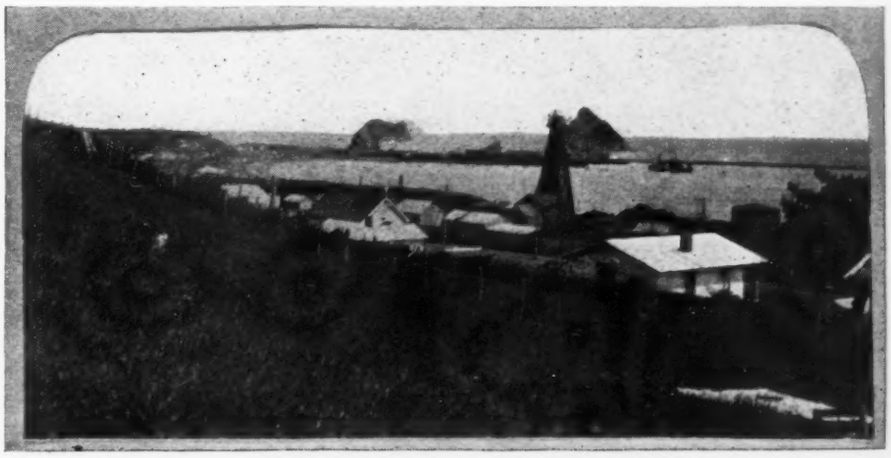
It was admitted that New South Wales may have some slight chance, but little attention was given to that state. Queensland was not visited by Clapp, as it called for a more expensive investigation than he was prepared to make. He does not favor it, however, on the basis of information he has gathered.

Clapp did find favorable conditions in one part of Australasia. That was in New Zealand, where he spent several months studying the geologic conditions in Taranaki and other provinces. The result is that wells are now being drilled at New Plymouth and at a point 20 miles to the southeast, where structure and fundamental conditions are most favorable. The work is being done by an Australian company, Taranaki Oil Fields, Ltd., of Melbourne, under the guidance of P. B. Whitney and D. W. Miller, geologists associated with Clapp, and of Ralph Whitteken as field superintendent.

HARRY C. FOWLER, petroleum engineer of the U. S. Bureau of Mines, stationed at Bartlesville, Okla., recently informed his associates that he was going to California for a visit with the home folks. Presently, cards were received announcing his marriage with Miss Mary Louise Ashbrook, on Oct. 14 at the Church of Our Savior, San Gabriel, Calif.

Mr. Fowler has been with the Bureau for about two years. He is a graduate of Leland Stanford University. Prior to entering government petroleum engineering work, he was resident petroleum engineer at Sante Fe Springs for the Amalgamated Oil Co.

The Bureau has carried on for many years safety work in the mining industry and in recent years has been studying accident causes and prevention in the petroleum industry. A great part of this investigation has been done by Mr. Fowler.



Sugar Loaf islands, breakwater, site of the Moturoa test well of Taranki Oil Fields, Ltd., (at inner end of breakwater) and one of the early wells in the foreground, New Plymouth, New Zealand.

Operating Costs *Can* Be Reduced

PRODUCTS OF OHMER FARE REGISTER CO.

- Odometers
- Hub Odometers
- Truck Auditors
- Recordographs
- Taximeters
- Fare Registers
- Fare Boxes
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Accurate, reliable, infallible mileage records as a basis for a positive control of truck operating costs—that's what scores of leading oil companies are getting through the use of this improved mileage recorder.

The Ohmer Odometer is especially designed for the hard, gruelling service incident to truck operation.

It is built for utility. Rugged and strong, it stands rough usage. Its big figures, always in perfect alignment, show at a glance the cumulative mileage total.

It is built for long life. It is a marvel of mechanical simplicity. The small number of parts are big and strong. They are driven from the transmission, and move with only 1/5 the speed of an ordinary speedometer. This results in a long life of trouble-free service. There is nothing to break—nothing to wear out.

It is built for convenience. It is easily and quickly installed wherever you want it—on dash, floor, seat support, or outside frame. And once installed, it requires no further attention.

Back of it are 26 years of engineering experience and manufacturing resources in the developing and perfecting of various precision recording instruments. It is a product of the largest manufacturer in the world of mileage and fare recorders.

Get more of the details of this remarkable Odometer. See for yourself why so many of the largest fleet owners have adopted it as standard equipment. Find out how it is saving money for them, and why it will *save money for you.* Write now for descriptive folder and copy of our free book giving a simplified system of truck cost accounting. There is no obligation of any kind.

LOOK FOR THIS SIGN

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OHMER FARE REGISTER CO.
Dayton, Ohio

OHMER
ODOMETER

Oil Patents Issued Oct. 21-27

Production

Feeding Pressure Regulator for Earth Boring Bits—Eggleston Smith, Mamaroneck, N. Y., assignor to Eggleston Drilling Corp., Dover, Del. Filed Jan. 21, 1925. No. 1,558,511.

Centrifugal Reamer for Oil Wells—Wade Hampton de Fontaine, New York, assignor to Gauntlett & Co., Inc., New York. Filed Oct. 2, 1922. No. 1,558,596.

Sucker-Rod Elevator—William P. Schlinger and George R. Paranteau, Oxnard, Cal., Filed June 23, 1924. No. 1,558,638.

Apparatus for and Method of Renewing Oil Wells—Irwin L. Dunn, Marietta, O., assignor to Tidal-Dunn Co., Tulsa. Filed Jan. 5, 1925. No. 1,558,796.

Safety Attachment for Rotary Hose—James E. Hitchcock, Fullerton, Cal. Filed, Feb. 10, 1923. No. 1,558,878.

Oil Well Fishing Tool—Bert L. Ligon, Electra, Tex. Filed Feb. 1, 1924. No. 1,558,902.

Deep Well Fishing Tool—Samuel B. Durbin, Tulsa. Filed May 21, 1925. No. 1,558,968.

Well Choker—Hubert E. Allen and Pexton F. Murray, Whittier, Cal., assignors to Allen & Courtney Oil Tool Co., Compton, Cal., Filed Feb. 14, 1924. No. 1,559,061.

Clamp—Arthur W. McCallister, Shidler, Okla., assignor one half to Alexander R. O'Brien, Bartlesville, Okla. Filed Feb. 9, 1925. No. 1,559,334.

Oil Well Hook-On Device—Morris C. Moore, Luling, Tex. Filed May 18, 1925, No. 1,559,348.

Refining

Medium for Bleaching, Cracking and Desulfurizing Petroleum and Other Hydrocarbon Compounds and Process of Preparing Same—Herman Reinbold, and Hugo Reinbold, Omaha, Neb. Filed May 19, 1924. No. 1,558,631.

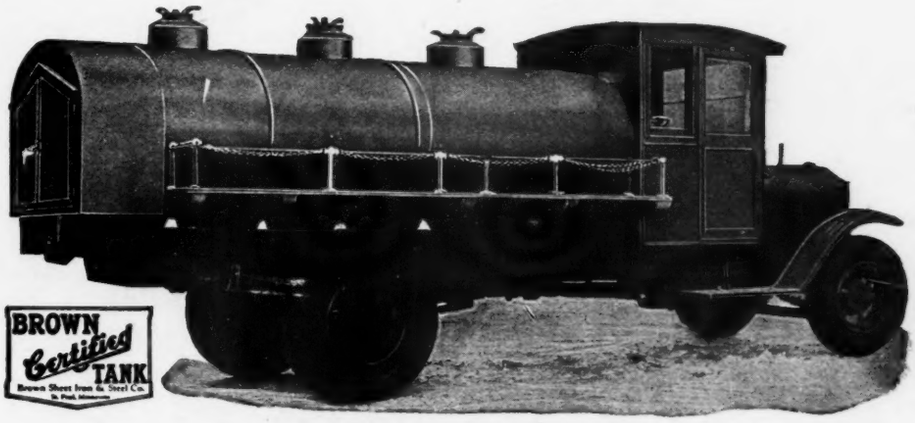
Medium for Bleaching, Cracking, and Desulfurizing Petroleum and Other Hydrocarbon Compounds and Process of Preparing Same—Herman and Hugo Reinbold. Filed May 19, 1924. No. 1,558,632.

Process for Condensing Vapors—Edward W. Isom and John E. Bell, assignors to Sinclair Refining Co., Chicago. Filed June 23, 1921. No. 1,558,811.

Process and Apparatus for Dehydrating Emulsified Oils—Gustav Egloff and Harry P. Benner, Chicago, assignors to Universal Oil Products Co. (Dubbs). Filed Nov. 1, 1920. No. 1,559,035.

Process and Apparatus for the Dehydration of Oil—Gustav Egloff and Jacque C. Morrell, Chicago, assignors to Universal Oil Products Co. Filed Feb. 18, 1922. No. 1,559,036.

Whatever Your Tank Requirements We Can Supply Them



Through many years of experience in building oil equipment, we know your problems in every detail.

Our exceptional manufacturing facilities enable us to give the best kind of service.

Truck Tank designed for fuel oil.

Write for Prices.

Northwestern Barrel Headquarters

BROWN SHEET IRON & STEEL COMPANY

1000 Berry Ave., ST. PAUL, MINN.

Licensed Manufacturers of Van Tilburg Rectifying Process

When Winter Comes

SELL

666 Winter Gear Compound
Zero-Brite Pressure Lubricant

These greases have stood the test of the most severe climatic conditions

See These Lubricants

AT OUR HEADQUARTERS

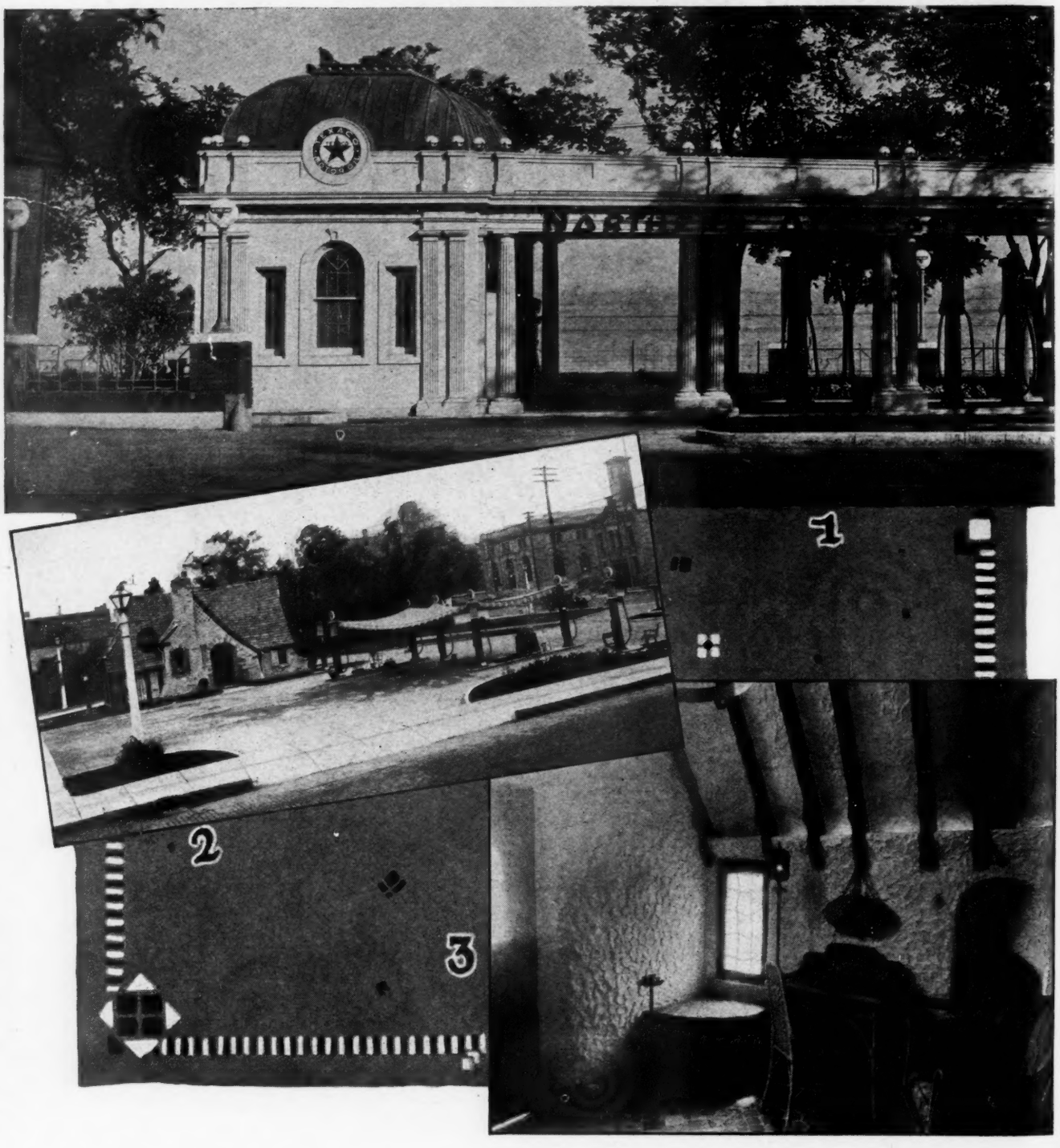
BROWN HOTEL - LOUISVILLE

For Sale to the Jobbing Trade Only

THE STEVENS GREASE AND OIL CO.

1890 CLEVELAND, OHIO *1925*

Where Service Stations, Through their Attractiveness, are



1. An unusual style of layout and architecture is employed in this newly completed service station of the Northern Oil Co., which is located on London road, Duluth, Minn., a highway which borders the shore of Lake Superior for more than 100 miles. Besides that it enjoys the further advantage of being at the corner of Ninth Ave. East and Superior St.

The long canopy, which is supported by four ornamental pillars on either side, extends out on the V-shaped lot until it comes to a narrow point at the front. A low fence around the top of the canopy encircles the domeshaped roof of the station. Double pillars at each corner of the station building, and an attractive red brick and stucco fence about the station, add to the architectural beauty of this station. With Lake Superior in the background, many large and luxuriant trees on every side, and flowers in the long narrow plots in both the fore and back ground, this station can easily be classed among the most attractive in the country.

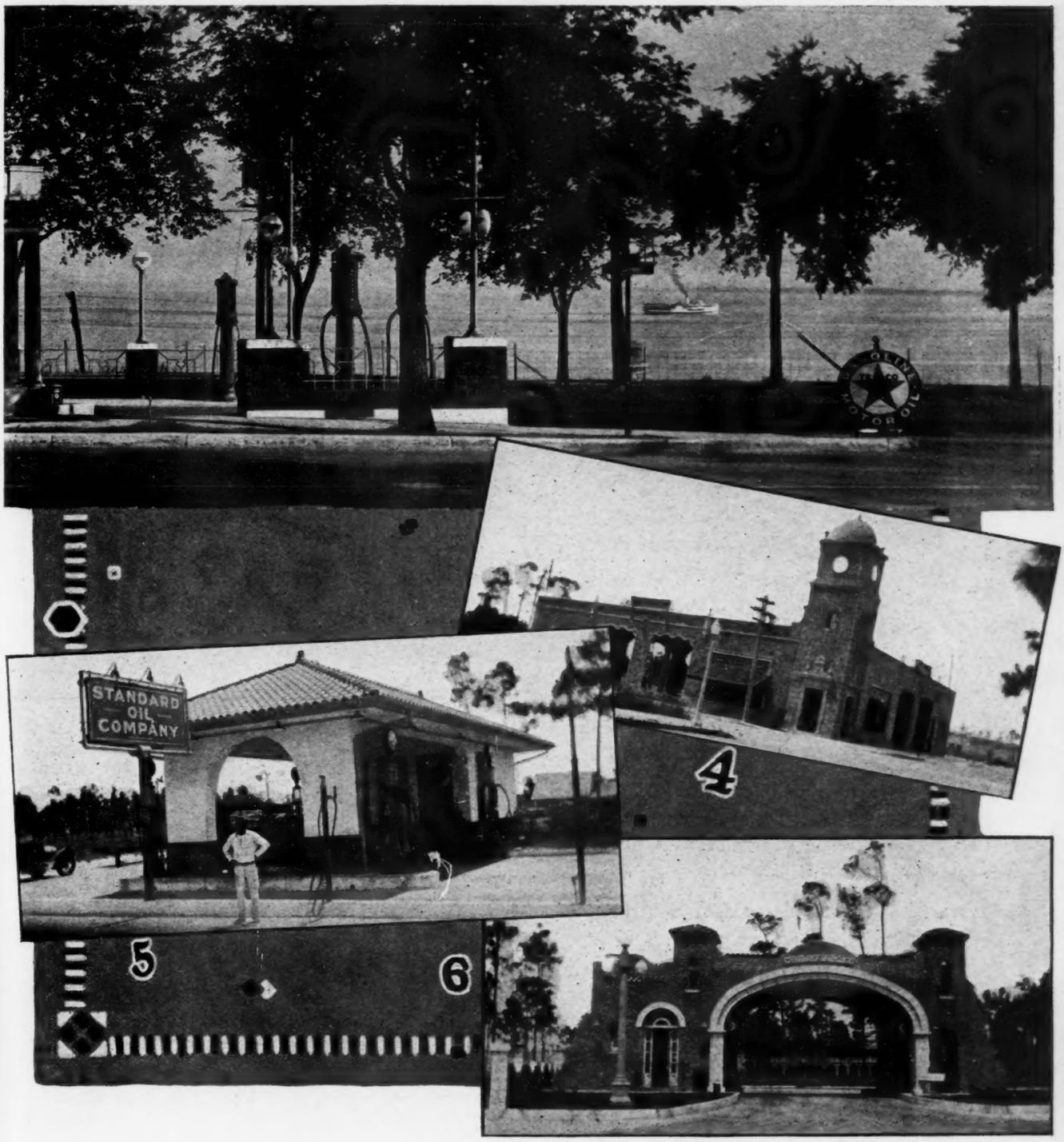
The station is equipped with rest room, main service room, oil burner heating plant in the basement and lube oil storage also in the basement.

The company is distributor of Texaco products, and maintains its headquarters at Virginia, Minn.

2. "Ye Loft", as this recently completed service station of The Spindler Co., covering three-fourths of a city block at Tenth and Quay Sts., Manitowoc, Wis., is known, is of the increasingly popular quaint English country house style. It has driveways from three streets, and four wide drives between the seven pumps permit the sale of three grades of gasoline.

An unusual feature of the station

Assets to the Community in which they are Located



building is that all the work has been done by hand. All hardware and lamps are hand-wrought and are the company's original designs, according to E. C. Spindler, president. The building is made of brick and hollow tile covered with tan-colored stucco. The roof is multi-colored. All wood work is of oak. The building was designed by C. C. Reynolds, an architect of Manitowoc.

Elm trees and shrubbery will be planted later to beautify the surroundings and to shut out unsightly views. Gasoline storage is maintained underground in three 15,000 gallon tanks.

On the opening day this station sold 5000 gallons of gasoline and over 250 quarts of oil. The station is equipped with air towers and drain pits.

A small restaurant has been built on the property which will cater to tourist trade, and garden umbrellas and benches have been placed on the grounds. Pumps and motor oil cans are covered by a canvas canopy.

The company distributes Boyce-ite, and Bartles bonded motor oils, Polarine, Mobiloil, Veedol, Havoline and Viscosity motor oils.

3. Here is an interior view of "Ye Loft" which is shown in picture No. 2. Note the accuracy with which the old English architecture has been carried out in the inside of the building. The beamed ceiling, rough finished walls, window seat of brick and an old-fashioned oval mirror, are all in harmony with the exterior of the station. Reed furniture, with cretonne coverings, is the modern note.

4, 5 and 6. Here are three service stations that have been built to harmonize with the homes and surround-

(Continued on page 141)

ELK OILS

FROM THE HEART OF THE APPALACHIAN FIELD

100% Pure Pennsylvania Grade Products

made in our Refinery located in a district producing one of the lightest grades of Pennsylvania Crude.

ELK FILTERED STOCKS

are available in six grades, assuring the proper grade for your blend.

600 D	600 Warren E
550 D	550 Warren E
500 D	500 Warren E

ELKRAY BURNING OIL

"The Burning Oil with a Brightness." For a high grade Kerosene ELKRAY will satisfy every requirement.

Our location and equipment afford prompt movement via leading Trunk Lines to northern, eastern, southern and western destinations.

Let Us Quote You On Your Requirements.

OTHER ELK PRODUCTS

High Grade specially run Gasoline for the rubber industry

ELK Motor Gasoline

Blending and Varnish Makers Naphthas

300 Mineral Seal Oil

ELK Absorbent Oil

ELK

REFINING COMPANY

Charleston, West Virginia

Refinery located at Falling Rock, W. Va.

Guaranteed 100% PURE PENNSYLVANIA OIL

Permit No. 25

The Distribution of Furnace Oil From Marketer's Standpoint

By C. L. Maguire
President, Northland Oil Co., St. Paul

Delivered before the Nebraska Independent Oil Men's Association at Omaha

THE big influx of oil furnaces in the cities, as compared to the smaller towns, is due to gas. A gas pilot light has heretofore been a necessity on an oil burner but lately, electric starters or pilots have been successful where gas is not available. This feature caused a delay in the adoption of oil burners in the smaller towns, so the small town jobber's problem is still before him.

I believe I am safe in saying that every oil burner will perform satisfactorily on kerosene and every country jobber has kerosene. My suggestion is that no country jobber should go to the expense of an additional storage tank for furnace oil until the demand for furnace oil in his locality almost equals his normal winter kerosene demand.

It is a matter of arithmetic to work out the problem. To the cost of a storage tank installed, add the cost of a car of distillate plus freight. That total will represent your capital investment. Take your normal capital turnover and figure from it what profit that investment should produce. Then check up the gallonage demands of your distillate trade and see if the profits on that gallonage indicate that your distillate investment will come somewhere near normal in the matter of profits. If it does, put in your storage tank and go to it. If it falls short, my suggestion would be to sell kerosene, discolored with a little cylinder stock to make it unfit for lamp purposes, at the distillate price until such time as the volume of distillate business warrants the installation of a separate storage tank.

Checking the Costs

For example, suppose you checked up and found you could get 24,000 gallons of distillate business this coming season at one of your country bulk stations. The ordinary refinery cost differential between kerosene and distillate is approximately 1 cent a gallon. The approximate cost of a storage tank installed with a car load of distillate in it would be about $1,200. Your problem would be whether the $240 to be saved if you put in distillate storage would be worth the investment.

Now we will assume that you have decided to put in the distillate storage and the demand is not large enough to warrant putting in two grades. Then you should get a distillate with a gravity in the upper 30's as it will work in any burner. Then when your demand increases, it is your problem again as to what gallonage is necessary to pick up

C. L. Maguire

that other ½ cent approximate slack between distillate in the lower 30's and distillate in the upper 30's.

Another thing to consider as a cost factor is the necessity of another tank wagon or truck for distillate. This, of course, is not so much of a problem as no doubt you can spare one of your regular gasoline trucks for this use during the winter months.

The day of the oil furnace is here and the demand for fuel will be a constantly increasing one. Fortunately, there is a great and increasing supply of this oil available due to the rapid increase in the installation of gasoline cracking processes. They will add almost as much furnace oil, I believe, as is obtained by straight distillation. The amount will depend largely on the comparative prices of gasoline and furnace oil and how far recycling for gasoline can be carried profitably.

Competition Is Great

In the larger centers the mad scramble for distillate gallonage has brought the inevitable result of low prices. I can safely say that there will be little if any profit in the distillate business in those large centers this year. Contracts over the present season are offered in Chicago at 6½ cents for the heavy fuels, up to 8 cents for the 38-40 distillate. The tank wagon market for kerosene is 11 cents. In the Twin Cities it is even worse as their freight rate is higher. A contract on the highest grade of distillates there can be secured at 8¼ cents. The kerosene tank wagon price is 12.6 cents. This in the face of an anthracite strike. In what other industry does such brainless marketing exist?

It is a pity that the industry cannot learn to market at a profit. From refiner to marketer we persist in marketing a big part of our products on a cost minus basis rather than a cost plus.

My home is in St. Paul. I am paying 8¼ cents per gallon this season for my distillate. I figured it out last winter that on the basis of my cost for anthracite, plus a man to look after the furnace, plus the ash man, that it would take better than 15 cent distillate to make me go back to coal.

Give the service, get the price and above all, get a profit. The business of swapping a nickle for 4 cents is not lasting no matter how camouflaged. Old man overhead is on the job and eating three square meals a day and don't you forget it. Remember the farmer who thought up the clever stunt of mixing sawdust with the bran. It worked fine except that, unfortunately, the cow died. Don't mix the sawdust of a cost minus product with the bran of a cost plus product. The first thing you know, you will be looking on while the creditors examine the wreck. If you can't sell furnace oil at a net profit—get that net—lay off it as much as you can and let the other fellow go broke. The time will come when it will pay you to enter that end of the business. Wait for that time.

Hopes for National Brand

In closing, I cannot help but revert to a subject very near my heart. For years I have had the vision that the Independent marketers would some day show a united competitive front, that they would submerge part of their stubborn individualities and, along certain lines, function as one. That vision is coming true in the Spread Red Eagle. That national movement is growing beyond our fondest expectations. The Spread Red Eagle is covering the country and the wide awake marketer is joining left and right. Red Hat gasoline signs are springing up all over the country. A nationalized lubricating oil line is just in the offing. Why not then a nationalized brand of furnace oil?

The greatest and yet, in certain ways, the most pitiful thing, in our branch of the industry, is the enormous inde-

"DRAINS LIKE A FUNNEL"

WELDCO TRUCK TANKS

TRADE MARK REG. U.S. PAT. OFF.

Cleans Itself While Emptying

Weldco engineers use gravity to force the last drop of oil or gasoline to fall into the funnel outlet of Weldco Truck Tanks, making it impossible for pockets of oil to form at the sides or corners of the tank. In this manner Weldco Truck Tanks clean themselves while they are emptying. And the same Weldco Tank can be drained of oil and then immediately used for gasoline.

For Speeding Up
Fuel Oil Deliveries

A Weldco pump attachment that will pass 90 gallons of fuel oil per minute can now be procured with the standard Weldco Truck Tank. This is in line with Weldco's policy of looking ahead to your future needs. Let us tell you how this pump will give you an edge on fuel oil competition. Mention fuel oil in your letter.

Write for your free copy of our valuable book, "What To Consider When Buying A Truck Tank."

The Youngstown Welding Company
Welders since 1912
Youngstown, Ohio

Oil And Grease Formulas

200 formulas, modern in every particular, have been prepared in a simple, non-technical style by Forrest A. Hoff.

They are of value to the refiner, jobber, compounder, broker and lubricating engineer.

Just attach your check to this ad and return it to us now. $50 is the reasonable cost of all this valuable information. **Synopsis sent upon request.**

National Petroleum News
830 Caxton Building Cleveland, Ohio

pendence and individuality of our membership. We all think we know more about the business than the other fellow.

If we could just sink a little of that and see how wonderfully we would all benefit by a little national co-ordination. Take the present conditions. An auto starts out for a trip through the country. About 100 per cent of our autos do that at least once a year. The owner fills with gasoline at his regular filling station. We assume for the purposes of this example that he is a regular customer of ours. We fill him up with our Premium Brand gasoline and our None Such motor Oil, bid him good-bye and a pleasant journey and he is on his way.

Now ever since we have made a customer out of him he has been a loyal buyer of Independent oil. All day long he rolls along keeping in the middle of the road to keep from knocking down Red Crown pumps. Frequently he sees a stranger pump Niobe Brand gasoline, Ideal gasoline, Radio gasoline, Bonded gasoline, Navy gasoline. More of them, all told, than the "Red Crowns." All day long his sight is drilling Red Crown into his head. The other brands, individually not coming often, carry no message. Even if he ran into a "Premium Brand" pump, the kind he has been using, the chances are he would not recognize it as, more than likely, the Premium Filling Station attendent has never asked him whether he wanted Premium gasoline, but has asked him, "High test or low test?"

About noon our tourist begins to look for a gasoline pump to fill up. Red Crown has been drilled into his head, also Mobiloil or Polarine. Strange Gasoline brands and strange motor oil brands, on account of their multiplicity and unfamiliarity, have not made a dent. He quickly gets the idea that he had better use the same grade on his trip and from then on the chances are it is Red Crown and Mobiloil or Polarine. And maybe he keeps it up after he gets home.

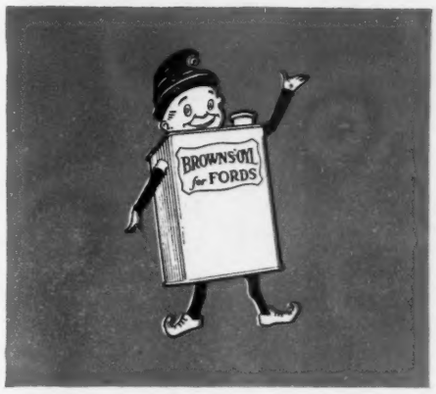
How different it would be if everywhere he went he found Red Hat gasoline and emblem motor oils and, when he returned in the fall, after reading the national magazines, he would call you up and ask if you had Emblem furnace oil and if so, "Come and fill me up."

NEW YORK.—The evening petroleum courses offered at the New York University in its Wall Street Division started on the fifth year on Sept. 23.

In the oil executives' course, which will be made up of men holding responsible positions in the oil companies in New York and vicinity, a considerable part of the time will be devoted to a discussion of cracking gasoline. Mechanical and economic difficulties and possibilities of the use of fuel oil in domestic heating will also be taken up, according to Ernest R. Liliey, under whose direction the evening oil courses are conducted.

The school can be reached at 90 Trinity Place.

BROWN'S-OYL *for* FORDS



A tried and proved product made by a company that has been keeping faith with 500 jobbers, year in and year out.

Jobbers handle this product under a guaranteed "Plan of Protection" that assures them they will hold the business they create.

Brown's work doesn't stop when he sells the jobber. He furnishes "He" man-power to help the jobber get distribution.

Brown then helps the dealer sell more Brown's-Oyl with a liberal free-offer to the customer plan that means real business.

The Oil will never be unknown in any community in which it is sold, because Brown backs Brown's-Oyl with four kinds of effective advertising.

And lastly, the Brown's-Oyl business grows steadily, because it answers the five requirements of a good Ford oil. Write us and let us tell you what they are.

This Product is Distributed thru Jobbers ONLY

Manufactured by **R. J. Brown Petroleum Co., 1416 Wittenburg Ave., St. Louis**

Gasoline and Oil Filling Stations

and Steel Buildings

We manufacture the simp'est to the most elaborate Stations. Put your own individuality in your Filling Stations—Let us help you work this out.

The Edwards Manufacturing Co.

524-544 Eggleston Ave. **Cincinnati, Ohio**

Get Our Prices On BENETCO

STEEL BARRELS

All Kinds

Right Quality-Right Price

Let Us Quote You

WILSON & BENNETT MFG. CO.

6530 S. Menard Ave. Chicago, Ill.

Sales Representatives In All Principal Cities

BENETCO

Steel Containers

Geologists Plan Program of Concentrated Study

DALLAS, Nov. 6

MEMBERS of the American Association of Petroleum Geologists who attend the eleventh annual meeting in Dallas, March 25-27, next, will find that the committee on arrangements has prepared a program differing materially from those of the past.

A general symposium embracing consideration of four general subjects of outstanding interest will serve to knit the program together. It is planned, according to R. B. Whitehead of the Atlantic Oil Producing Co., chairman of the entertainment committee, to limit the number of papers presented and to have these deal with new and interesting subjects.

The four general subjects to be concentrated upon, will be as follows:

(1)—Micro-paleontology as applied to the finding and development of oil fields. It is proposed to exhibit enough plates showing characteristics of formations that the stratigraphic transition can be followed through thick geological sections, say from the Peru sand of Oklahoma to the Georgetown limestone of Texas.

(2)—New apparatus for locating structure. Geo-physical methods such as the "Seismos" and the torsion balance will be discussed and a famous professor from Vienna will be present to read a paper of broad scientific interest.

(3)—Core-drilling for structure. This part of the symposium will deal with primary and advanced methods, costs, apparatus and methods of correlation.

(4)—Origin of petroleum. This subject will be approached from the practical as well as the theoretical viewpoint and it is hoped to throw light on it in such manner as to disclose a fuller measure of existing oil reserves.

Dr. David White, who is now working on micro-thermal observations on shales, may be expected to throw light sooner or later on the subject of how kerogen was turned to oil. Earl Trager of the research department of the Marland Oil Co. of Delaware and Alex McCoy, vice president of the Marland Oil Co. of Colorado, have both been engaged in extensive scientific work with regard to the origin of oil and probably will lead discussions, according to Mr. Whitehead. F. M. Van Tuyl of the Colorado School of Mines also is proposed as a leader in one of the general discussions.

Mr. Whitehead as chairman and Leon J. Pepperberg as secretary-treasurer of the Dallas entertainment committee have made public the following list of committees:

General Committee—W. E. Wrather, F. H. Lahee, F. W. DeWolf, Angus McLeod, H. B. Hill, Leon J. Pepperberg, R. B. Whitehead.

Finance Committee—Leon J. Pepperberg, Leon F. Russ, F. Julius Fohs.

(Continued on Page 136)

Guaranteed to Increase Your Gallonage

THIS Plan increased one station's gallonage 300% in thirty days.

It is offered to you with a positive guarantee of results—increased gallonage or your money back!

The Plan gives you a new way to advertise your stations—at slight cost and with immediate results.

"Accurate Measure, or No Gas" is the keynote—as advertised in Saturday Evening Post full-pages—and it takes instant hold on the motoring public.

Write or wire for the Plan in detail—remember, we guarantee *it to increase your gallonage* at least 20%.

MILWAUKEE TANK WORKS

MILWAUKEE, WISCONSIN

(At Booth No. 1, N. P. M. A. Convention, Louisville)

Mail This Coupon!

MILWAUKEE TANK WORKS Date.....

We operate ( ) stations of ( ) Pumps each, at which increased gallonage is desired. Describe your Plan.

Name.....

Address.....

.....

By.....

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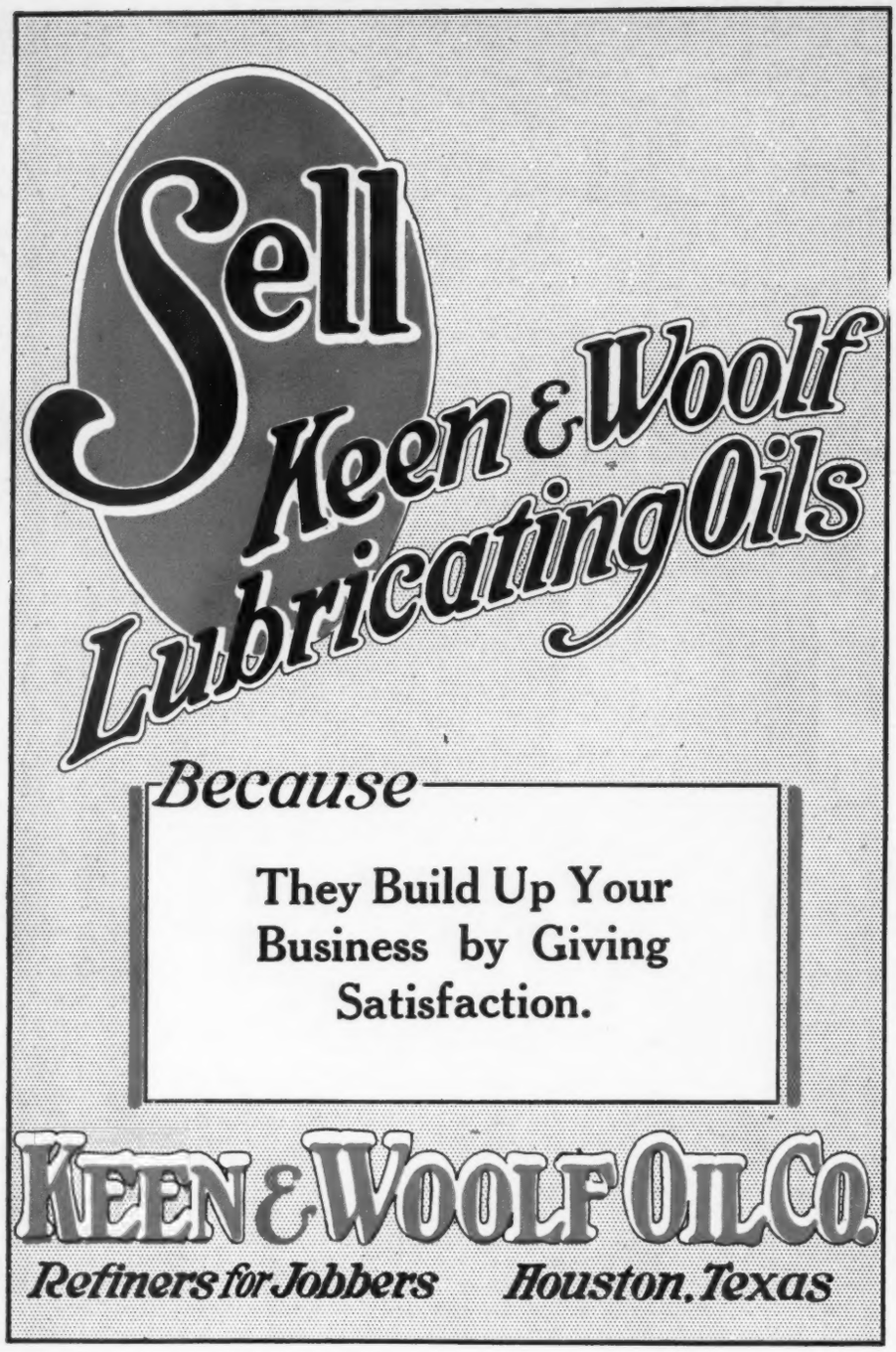


American Operating Methods

Are explained in a concise, practical way in OIL FIELD PRACTICE, by Dorsey Hager, petroleum geologist and engineer.

It is written for the business man, the oil field driller and operator, the geologist and the investor.

You may obtain this book containing 310 pages and 98 illustrations by mailing your check for $3 to—

National Petroleum News

820 Caxton Building Cleveland, Ohio

(Concluded from Page 134)

Publicity Committee—Frank Reeves, W. E. Wrather, W. A. Reiter, J. M. Wilson, R. E. Rettger.

Program Committee—W. E. Wrather, F. H. Lahee, F. W. DeWolf.

Reception Committee—Heath M. Robinson, R. E. Shutt, S. A. Thompson, A. C. Bierman, J. W. Bostick, R. F. Imbt.

Entertainment Committee—R. B. Whitehead, J. Elmer Thomas, John R. Suman, George Sawtelle, R. E. Rettger, W. H. Conkling, Carlton Meredith, Heath M. Robinson, Angus McLeod, Dugald Gordon, C. H. Row, Glenn Ruby, A. F. Truex.

Registration Committee—Chester A. Hammill, C. E. Decker, E. B. Stiles.

Reservations Committee — E. W. Ames, Carlton Meredith.

Association officers are: E. De Golyer, president, New York City; R. S. McFarland, vice president, Tulsa; Raymond C. Moore, editor, Lawrence, Kan.; Charles E. Decker, secretary-treasurer, Norman, Okla.

National Transit Co. Must Pay $222,000

WASHINGTON, Nov. 7.—The National Transit Co. (pipe line) must pay a judgment of $221,848 obtained against it by the director-general of railroads, otherwise the government of the United States, obtained in the federal courts of Pennsylvania. The Supreme Court of the United States has refused the application of the transit company to have the case brought before it, on a writ of review, from the circuit court of appeals at Philadelphia.

While the government was operating the railroads for the winning of the war one of the transit company's pipe lines, laid along the right of way of the Erie railroad sprung a leak. The oil that escaped therefrom was set on fire by a spark from a switch engine, at Oil City, Pa. In the resulting fire the factory of the Joseph Reid Gas Engine Co. was destroyed. The latter obtained judgment against the director-general, for $186,157, which includes interest and costs. The director-general paid. Later he sued the Transit company with the result as before indicated, his suit being based upon indemnity clause in the contract between the railroad company and the Transit company under which the latter held the railroad company harmless from any damage that might be caused by the Transit company.

The Transit company contended that the indemnity clause was for the benefit of the railroad company only. The director-general contended that that contract was one of the items of property taken over by the government when it seized the railroads and operated them. Denial of the application, by the Transit company, for a writ of certiorari, leaves the judgment of the lower court stand, without chance of review by anything higher.

Individual Well Record is Kept on Oil, Gas and Vacuum

WICHITA FALLS, Nov. 5

THE reduction of information on the amount of oil and gas produced from each well to a form that is easily read is becoming more and more desirable. The day when the operator looked only at the performance of the lease as a whole, without detailed information on lame spots that developed, has not entirely passed but presently it will have.

The tendency now is all toward the segregation of production by wells. A number of office forms have been worked out and are being kept up by producers which afford an accurate reflection of what is going on at each well. Various methods have been developed to keep fairly close tally on a well's performance and costs are segregated to each well. Thus, the "star boarders" are known and there is easy determination of the factors which are cutting down profits on the lease operation.

The accompanying form is one that is used by the U. S. Geological Survey on the one property operated by the government. This is in the bed of Red River, northwest of the Burkburnett field. The property was for four years under a receiver appointed by the Supreme Court of the United States as a consequence of a boundary dispute between Oklahoma and Texas, with the United States an intervenor. In 1924, the receivership was discharged and pending the final awarding of lands, wells and impounded profits, the U. S. Bureau of Mines, then entrusted by the Department of the Interior with supervisory work on leased public lands, assumed charge of operations. When the Bureau was transferred to the Department of Commerce, Red River operations were placed under the Geological Survey and will remain there until Dec. 1 when the claimants who were successful in establishing title will take back their properties.

The government has tried to keep a close record of individual well performance and the accompanying form shows the data for two months on one of the wells, charted to cover the vacuum on each well, the gas production and the oil output for each day. Under the heading of "Remarks" there is given any reasons for the well's being off production, and the down time.

In general, the department has not permitted a vacuum pull of more than six inches on a well. It was found that more than this increased the sand trouble, bad enough in any case, and meant rapid cutting of working barrel cups.

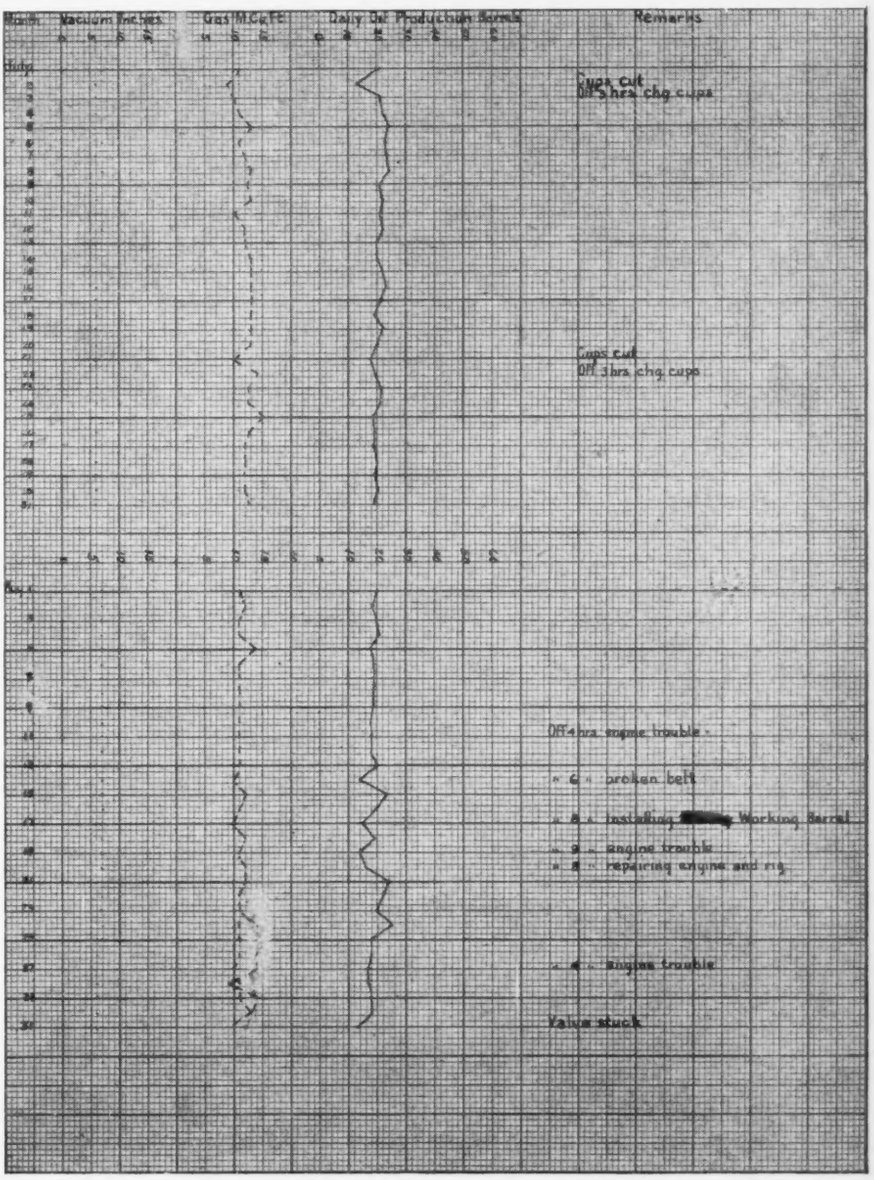
Certain of the data charted on this form is not exact, as the government was subject to the same limitations that oil companies are. In four cases, wells are on individual meters and the gas production is taken direct, but the rest of the wells are in groups. The installation of orifice plates being expensive, readings are made at the master meters. At regular intervals, each well of the group is shut in for an hour and the difference in volume shown by the meter is assumed to be the amount the well is producing. In addition, regular tests are made for gasoline content.

It was necessary to be thus particular about the gas production, for the wells are located on tracts of different claimants and accounting had to be made on a per well basis. Such complication would hardly arise on a lease belonging to an oil company, as with careful attention to the mechanical condition of the well and studying its performance from an oil standpoint, the gas would pretty well take care of itself and frequent gauges would not be required at each well.

Meter readings taken thus before and after a well of a group was shut in would show the difference in volume to be assigned as the well's gas production. A number of such readings established an average for each well which could be taken as being very close to the true amount.

The estimated total volume for any one group, divided into the volume of an individual well, gives a multiplier which can be used for prorating the monthly volume.

Something like the same method is used in arriving at the oil production from each well. The production in this field is well settled and except for mechanical trouble, the output from each well is steady. In some parts of the country, regular gauges are taken



Form of graph used by the U. S. Geological Survey for charting oil and gas production of wells in the Red River pool, operated by the Survey. This shows production of one well for a period of two months.

The Cross Cracking Process

A feeling of security rests with each Cross Licensee, not only because of the great mechanical strength of the apparatus, but also from the knowledge that he will obtain the greatest possible profits under all conditions.

The M. W. Kellogg Co.

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on oil production from pumping wells by the use of a portable tank into which the well is pumped and declines in lease output are checked up to the wells that are in trouble. Owing to the fact that the Red River wells are located in a shifting riverbed, over much of which no form of transportation can be used regularly, the individual well gauges have to be handled in another manner.

In no case are more than three of the Red River wells pumped into one tank battery and in most cases only two use the same flow tanks. At least once a week the wells are separated, one being cut out of the battery while the other one or two are pumped. There is a "bleeder" on each well which enables this to be done easily. Trouble is thus easily isolated to the well where it has developed.

Attractive Stations Asset To Community

(Continued from page 129)

ings at Coral Gables, exclusive residential district of Miami, Fla.

The Moorish style station in picture No. 4 was built at a cost of $75,000 by M. G. Goetz. The Moorish tower, the long narrow slits representing windows, spiral pillars in the interior, spacious curving door-ways, and decorative Spanish grilles of wrought-iron giving a cloister effect, are all in keeping with the type of architecture familiar in countries bordering the Mediterranean Sea.

Of buff colored stucco, trimmed with white marble, and red tile roof, is this unique and ornamental service station of the Gulf Refining Co., shown in No. 6, also at Coral Gables. Spanish architecture is employed, even to the balconies at the narrow windows near the top of the towers on either side of the station. Colored glass is used on the doors, which are also enclosed in iron fences similar to the balconies above. Through the wide, gracefully-curving driveway can be seen one of the administration buildings of Coral Gables.

Lamp posts harmonizing with the station, a low curving marble wall at the sides, and trees in abundance on every side, make this station one of the most ornate in the country.

In direct contrast to the Moorish and Spanish architectural designs, respectively, of stations No. 4 and 6, is the station of the Standard Oil Co. of Kentucky, shown in picture 5. The usual simplicity of design of the majority of Standard stations, is followed here. A red brick foundation supports the stucco walls and wide pillars at the front underneath the canopy. The pillars, which are of uncommon style, give the appearance of a wall from which an arch, to form a doorway, has been cut out.

Co-operative Effort in Gathering Well Logs Highly Successful

Staff Special

WICHITA, KAN., Nov. 7

OPERATING only a little more than three months, the Well Log Bureau of the Kansas Geological Society is now maintaining weekly service in distributing logs of Kansas wells and has at this time 52 subscribers, including the principal companies operating in the state.

The service is unique in that it is wholly a co-operative venture. Some states, notably Oklahoma, require operators to file copies of logs of wells they drill and these are sold to anyone who is interested. The Kansas Geological Society had no such statutory assistance in collecting logs and has depended solely upon the interest of operators in this form of exchanging information.

Offices are maintained in the Bitting building under the management of George H. Bruce, formerly of the Empire Gas & Fuel Co. The service is not quite self-supporting, but additional subscribers now in sight will enable it to break even, which is all that is desired by its sponsors. A small cash surplus in the hands of the Kansas Geological Society at the close of the spring meeting of the American Association of Petroleum Geologists was used to start the work and has been drawn upon to cover the deficits.

This is the first organized attempt to collect logs of Kansas wells and operators, recognizing the value of having immediately available the log of any well in the state, are aiding, not only by subscribing to the service but by putting into the bureau the logs they have collected.

The state of Kansas has always compelled its geological survey to subsist on small appropriations and it has never had funds enough to attempt a systematic campaign to collect well logs. A fairly large collection, gathered by state geologists over a period of many years, was important but not comprehensive.

At this time the well log bureau is mailing to subscribers about 35 logs each week. The plan adopted was to supply in this weekly service logs of all wells drilled from July 1, 1925. The service did not start promptly at that time, so the bureau is still catching up with some of the completions. It will presently be up to date and from that time on the regular service will consist of current completions. About 350 logs have been mailed to each subscriber on the regular service since the mailing was started. With each week's log collection there is also mailed an index corresponding closely to a scout's report, summarizing the information on the heading of the well log sheets.

The weekly service is given for $7.50 per month. Several subscribers have objected to this price—the objections being the reverse of usual complaints about prices. These subscribers expressed their doubt as to the ability of the bureau to operate at this price and said they would gladly pay more if necessary to keep up the work.

For logs of wells completed prior to July 1, 1925, the bureau has adopted a price based on quantity. On any number of logs up to 10, the price is 50 cents per copy; 10 to 25 cost 35 cents each and any number over 25 sell for 25 cents a copy. The bureau believes that when the task of collecting logs is completed it may be able to reduce the price for old logs.

An addition to the service recently made is the mimeographing of articles which appear in geological or trade publications having a bearing on Kansas geology. These reprints are sent without cost to the subscribers.

To date about 10,000 logs have been collected by the bureau. The task of getting in those on wildcat territories has been almost completed, as well as the gathering of logs on Kansas fields of the deeper sand type. There are still a great many logs yet to be obtained on wells in the shallow sand territory of southeastern Kansas and considerable work is required in finding these. Many operators who drilled wells in this area have dropped out of the business in this state and much correspondence is necessary to locate them.

Companies, individual operators and geologists have been earnest in their co-operation with the well log bureau. At the outset, J. Elmer Thomas, consulting geologist, contributed about 2500 logs of shallow wells and some 500 deep wells, comprising a collection that had been years in the making. Then the Marland Oil Co., Amerada Petroleum Co., M. M. Valerius, Gypsy Oil Co., Derby Oil Co., Anderson & Anderson, Marvin Lee, F. G. Holl, Thrall & Rhoads, Hartman & Skaer, Russell Crabtree, the Arkansas Fuel Oil Co. and the Midwest Refining Co., to mention some of the companies and geologists who helped, gave either copies of their Kansas logs or lists of what they have. There are thus available to the well log bureaus, in addition to the 10,000 or more logs in its files, lists of many others that can be had on request from the bureau.

Officers of the Kansas Geological Society are E. W. Scudder, president; John R. Reeves, vice-president and Charles E. Straub, secretary-treasurer. The log committee, under whose immediate direction comes the well log bureau, consists of Amil A. Anderson, George A. Forrester, F. G. Holl and Marvin Lee.

Your Interest in Our Reputation

If you had won a hat on the election last fall, what kind of hat would you choose? It's a safe bet you would pick one made by a certain well known manufacturer whose hats have been a standard of quality for seventy-five years.

Now how did you know those hats are good hats? Of course you probab'y have worn them, but the fact that those hats have a *reputation*, and have maintained that reputation assures you that they are good hats. Whether you have ever handled our products or not, the prestige that has grown up around the name of White Eagle is your assurance that the products bearing that name have unusual merit.

White Eagle
Oil and Refining Company
SALES OFFICES
ST. PAUL — KANSAS CITY — FT. WORTH

STATION TANKS

Field Storage	10,000 gals. 12,000 " 20,000 "	in stock	Refineries Complete

Immense Stocks ***Immediate shipment***

We have been in the business since 1871 and fully understand your requirements. Wire, write or phone your inquiries.

The Reeves Brothers Company
Alliance, Ohio

Automobile Club Seeks Price Concession

TULSA, Nov. 6.—A new automobile club designed to get gasoline price concessions for its members has been organized in Oklahoma. In a warning sent to members of the Oklahoma Oil Jobbers Assoc., C. M. Kinney, secretary, has shown what the club is trying to do and advised members that the signing of such an agreement might well precipitate the jobbing industry of the state into a costly price war.

Quantity discount agreements are in force in Oklahoma following the Standard Oil Co. of Indiana, plan. As far as can be learned these agreements are being made only with commercial users who actually consume large quantities of motor fuels.

The Automobile Owners Service Club, as the new organization is called, seeks to pool the buying power of individual motorists and thus demand concessions based on total sales to the group. On present markets the plan would constitute a discount of around 2 cents per gallon.

Following are the principle clauses in the proposed agreement which the club promoters are trying to put across without much if any success:

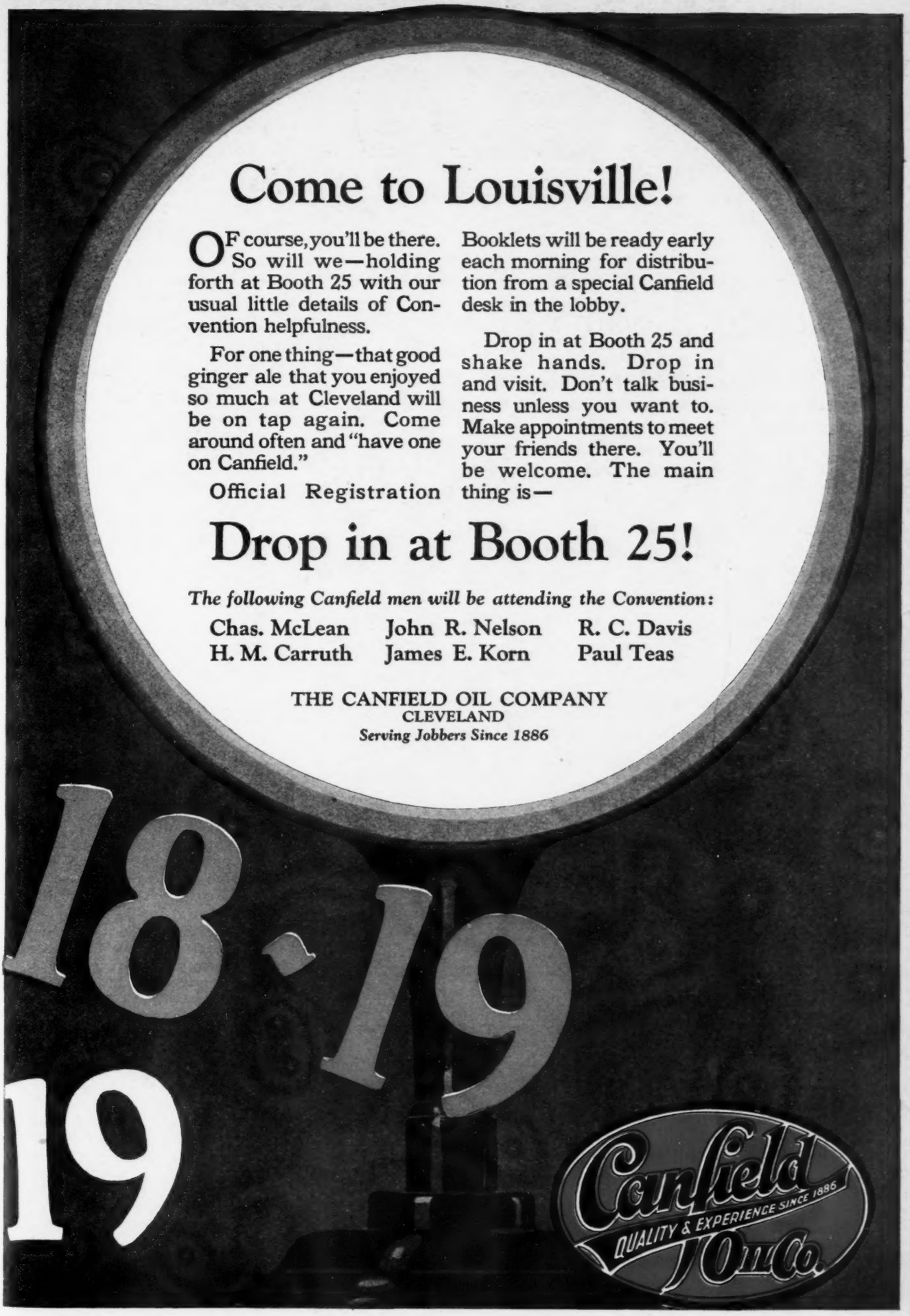
"Should first party (Automobile Owners Service Club) purchase from the second party (the oil company) during any one month six hundred dollars ($600.00) worth of coupon books, the purchase of which books entitles purchaser to 5 per cent discount, an additional discount of 7½ per cent shall be allowed first party for the advertising by first party and the selling by first party of said coupon books to its members.

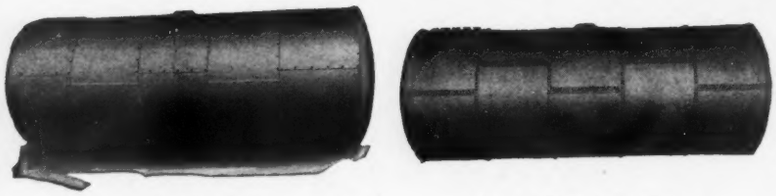
"It is further agreed that, when the first party has increased the purchases so that the aggregate amounts to twelve hundred dollars ($1,200.00) worth of said coupon books for any one month, then it is agreed between the parties hereto that an additional discount of 2½ per cent shall be allowed by the party of the second part on account of the sales and advertising, as aforesaid.

"The above terms are allowed on each month's business and each month's business shall be considered separately in making the adjustment herein. Should the first party fail to take the amount of books referred to above any one month, it is understood and agreed that they shall have at least the 5 per cent discount in any event.

"The benefits of this contract shall be allowed at any of the stations of the second party and said coupon books shall be honored at any of the stations of the second party."

OKLAHOMA CITY.—George A. Weyel, formerly auditor of the Nyanza Refining Co., has opened offices at 201 Braniff Bldg. here to engage in public accounting. He will specialize in oil accounting and oil tax reports.


Come to Louisville!
OF course, you'll be there. So will we—holding forth at Booth 25 with our usual little details of Convention helpfulness.
For one thing—that good ginger ale that you enjoyed so much at Cleveland will be on tap again. Come around often and "have one on Canfield."
Official Registration Booklets will be ready early each morning for distribution from a special Canfield desk in the lobby.
Drop in at Booth 25 and shake hands. Drop in and visit. Don't talk business unless you want to. Make appointments to meet your friends there. You'll be welcome. The main thing is—
Drop in at Booth 25!
The following Canfield men will be attending the Convention:
Chas. McLean
John R. Nelson
R. C. Davis
H. M. Carruth
James E. Korn
Paul Teas
THE CANFIELD OIL COMPANY
CLEVELAND
Serving Jobbers Since 1886
18-19
19
Canfield
QUALITY & EXPERIENCE SINCE 1886
Oil Co.



Welded-Riveted *Super-Riveted-Welded*

The Effect of Standardization on Quality and Prices

Before this age of standardization, prices would have been prohibitive on steel tanks of present-day "Youngstown" quality.

However, as perfected manufacturing processes and practice improved the quality, organized economies and standardized types and sizes reduced the manufacturing costs until today Youngstown Tanks actually cost less.

If you do not already have our Catalog No. 500, by all means drop us a line on your business stationery.

The Youngstown Boiler & Tank Company
Youngstown, Ohio

Youngstown
"KEENE TANKS MADE"
STANDARDIZED
REG. U.S. PAT. OFF.

More than 200,000 "Youngstown" Tanks in Service

REFINING

Reliable information on every phase of modern American refinery practice is to be found in the book prepared by H. S. Bell, and called AMERICAN PETROLEUM REFINING.
Some of the chapter headings are: Refinery Site and General Arrangement; Stills; Cracking; Cold Settling; Compounding; Storage of Oil; Bulk Transportation; and Fire Protection.
The cost of AMERICAN PETROLEUM REFINING is only $5. Just mail your check today to—

National Petroleum News
833 Caxton Building **Cleveland, Ohio**

Texas & Pacific Takes Over Montrose Refinery

Staff Special

FORT WORTH, Nov. 5.—The Texas & Pacific Coal & Oil Co. has purchased the former Montrose refinery at Fort Worth from the Louisiana Oil & Refining Corp. of Shreveport. Announcement of completion of the deal was made today.

Plans of the new owners include the installation of a complete lubricating oil plant with Sharples centrifuge machines to produce bright stocks as well as neutrals. At the present time the refinery is a skimming plant with a capacity of approximately 4500 barrels per day.

Although the Montrose plant has not been operated for over two years it has been kept in good condition so that the new owners expect to have it in shape for operation within the next two months.

The Texas & Pacific entered the refining end of the business two years ago when it built a 2500-barrel skimming and cracking plant at Wynnewood, Okla., to handle its production of Garvin county crude. The new plant will give the company an outlet for a large part of its production in north and central Texas fields.

Report Big Extensions to Gulf Refinery

HOUSTON, Nov. 5.—Port Arthur dispatch to the Beaumont Enterprise says the Gulf Refining Co. will spend $14,000,000 in expanding its Port Arthur works, according to information from an authoritative source. The dispatch says the project will come as a follow-up to dredging and filling of a vast area owned by the Gulf on the Sabine road adjacent to and south of Taylor's bayou along the edge of the present refinery site.

No denite construction program was announced, although the dispatch said virtually every phase of refinery capacity would be increased. Included in the program, however, will be an increase in pressure still capacity and steel storage room together with addition of an asphalt plant.

The program referred to in the Port Arthur dispatch is said to be over and above construction recently announced of 20 pressure stills estimated to cost $1,500,000 and a $40,000 plant hospital.

An increase in wages amounting to 20 per cent and affecting mainly pressure still workers and shift men was also announced, these advances being general in the departments affected.

RED WING, MINN.—The Standard Oil Co. of Indiana has opened a new service station here.

ON THE LAZY BENCH

Totality

The little fellow at the corner selling papers looked so forlorn and wistful that the passing stranger couldn't forbear speaking to him.

"What's your name, sonny?

"Jim," was the reply.

"Jim what?"

"Just Jim."

"Well, what's your father's name?"

"Ain't got no father."

"Well, who's your mother—brother sisters?"

"Ain't got none."

"No one at all?" asked the man in pity.

"Nope," the boy answered. "When you seen me you done seen all there is of us."

—Magnotene

◈ ◈ ◈

Mother Him

When the preacher called for women to stand up and promise to go home and mother their husbands, only one little woman arose, and when he told her to go home and mother her husband, she said: "Mother him? I thought you said smother him!"

—Magnolia Oil News

◈ ◈ ◈

A colored mammy came into the office of the estate for which she worked to receive her wages. As she could not write she always receipted with the customary cross.

On a following occasion she made a circle instead of a cross and the man in charge noticing it remarked to her about it.

"Well," the old negress explained, "ah done got married yesterday an' changed mah name."

◈ ◈ ◈

Torment

"I don't see any hell in this," said the new arrival, looking over the Hades' Golf Course.

The imp in charge leered.

"We have arranged a slow foursome which will be just ahead of you for all eternity," he remarked quietly.

—Life

◈ ◈ ◈

Laziness

Polly: "So he married his former wife's sister?

Dolly: "Yes; he didn't want to go to the bother of breaking in another mother-in-law."

◈ ◈ ◈

"Women are wanton things, eh, what?"

"Yeah, always wantin' everything."

Special Fees, Too

"Who is your family doctor?"

"I can't tell you."

"Why not? Don't you know his name?"

"Yes. Dr. Johnston used to be our family doctor, but nowadays mother goes to an eye specialist; father to a stomach specialist; my sister to a throat specialist; my brother is in the care of a lung specialist, and I'm taking treatments from an osteopath."

—Beacon Flash

◈ ◈ ◈

The reporter was sent to write up a charity ball. His copy came in late and it was careless. The editor reproved him the next day by quoting an extract:

"Look here, Scribler, what do you mean by this: 'Among the most beautiful girls was Alderman Horatio Dingley'? Old Dingley ain't a girl, you idiot! He's one of our principal shareholders."

"I can't help that," returned the realistic reporter, "that's where he was."

—Magnotene

◈ ◈ ◈

A wedding party was disturbed by the crying of a baby belonging to one of the guests. One of the young women present remarked to the bridesmaid, "What a nuisance babies are at a wedding!"

"I should say so," returned the latter, "When I send out invitations to my wedding I shall have printed in the corner, 'No babies expected.'"

—Doherty News

◈ ◈ ◈

The Long Kind

"Papa," said the small son, "What do they mean by college bred? Is it different from any other kind of bread?"

"My son," said the father, "it is a four years' loaf.

—Doherty News

◈ ◈ ◈

Father (to daughter's suitor): "Why, young man, you couldn't even dress her."

Suitor (gamely): "Zatso! Well, it won't take me long to learn."

◈ ◈ ◈

Bim: I see they have at last decided to pave the streets with wooden blocks.

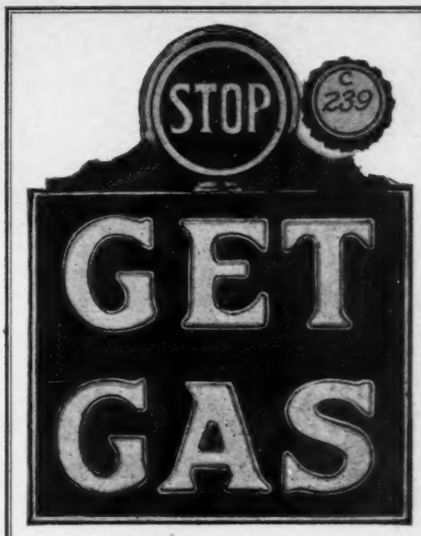
Bam: Yeh, how did that happen?

Bim: Well, the members of the committee sort of put their heads together.

◈ ◈ ◈

He: Do you know Poe's "Raven"?

Him: What's he mad about?



FIRST TIME IN HISTORY

Unbreakable Glass Signs Pump Globes

Write for Prices and Circular

Opalume Sign System, Inc.
Battle Creek, Mich.

Dart
BUILT BY OIL MEN FOR OIL MEN
VISIBLE PUMP

Replace Your Old Equipment

The DART JUNIOR fills the immediate demand of oil companies for lower priced pumps. It enables the replacement of old equipment with that which is most modern—at the lowest price at which any visible 10-gal. pump has ever been sold. Guaranteed in every way. Don't fail to get complete information about this pump—gladly sent upon request.

Sales Agents Wanted

Caward Dart Company
PUMP DIVISION
WATERLOO, IOWA

Character

¶ It has been said that the word "Uneeda" is worth, to its owners, one million dollars per letter.

¶ Character in merchandise is responsible for such a high valuation and fine standing.

¶ The character and standing of the Fry Visible Pump is, we believe, just as outstanding in this industry as "Uneeda" is in the biscuit field.

DEPT. P. N.

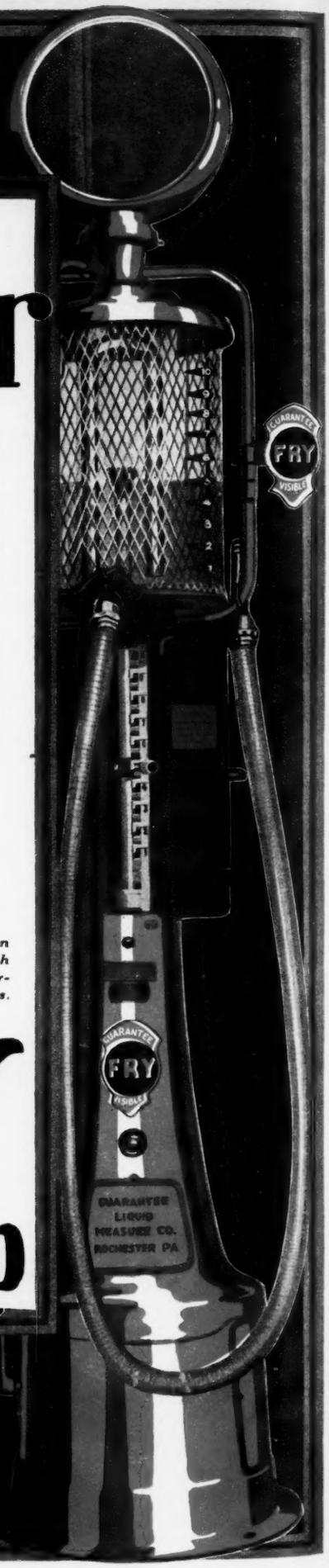
Guarantee Liquid Measure Company
Rochester, Pennsylvania

PHILIP GIES PUMP COMPANY, Limited
Canadian Manufacturers and Distributors
KITCHENER, ONTARIO

"See our display at the National Petroleum Marketers Association Convention, Louisville, Ky., Nov. 17th to 19th, booths 124 and 129."

Made in five and ten gallon capacities—both labeled by the Underwriter's Laboratories.

FRY Visible Pump



GUARANTEE FRY VISIBLE

"Always Accurate"

REFINERY-TANK WAGON MARKETS

All Mid-Continent Oils Stronger; Exporters Buying Gasoline

Staff Special
Tulsa, Nov 7.

AN optimistic tone ruled Mid-Continent refinery markets last week and prices on virtually all products were stronger. It was the first time in several weeks that a general advance has occurred in the whole market. The upward movement was led by fuel oils, quotations on which ranged from 5 to 10 cents higher today.

Export buying, reduction of refinery runs, and a decline in gasoline stocks in this territory have done their part in adding to the bullishness of motor fuels. A general belief that Mid-Continent crude oil prices are resting on bottom for the remainder of this year, has also given the trade more confidence in the present market situation.

Today marked the end of the second week of active buying of gasoline for export. At least three purchases of 64-66, 375 end point goods were placed with Oklahoma and north Texas refiners, and inquiries remained in the field of additional goods which had not been purchased today. Commitments in both markets were in excess of 2,000,000 gallons, the greater part of which went at 12 cents per gallon.

Gasoline Shipments Increase

One of the most healthful conditions in weeks was evidenced in reports of 124 Mid-Continent refiners to National Petroleum News in the week ended Oct. 30. Not only had these plants reduced their total runs over 11,300 barrels daily, but their gasoline shipments increased more than 2,800,000 gallons over the preceding week, and their stocks were reduced almost 3,000,000 gallons.

A decline of over 400,000 gallons in kerosene stocks reduced inventories to a point lower than at any time since these refineries reported to this publication. Their shipments of gas and fuel oil increased 5,000,000 gallons, reflecting the heaviest movement since early August, and total stocks in the five reporting states were reduced 8,000,000 gallons.

These facts were published a week ago but attention is called to them again since they were important factors contributing toward advancing prices of most products this week. Decline in gasoline stocks at this season of the year and continued export buying were particularly gratifying to refiners.

Believe Crisis is Past

It is felt in many quarters that refinery markets as a whole have definitely rounded the corner toward better prices for the remainder of the year. This view, however, is not concurred in by many observers, particularly with reference to motor fuels. They say that since recent purchases for export prevented a fall in prices at a time when it appeared that domestic demand was insufficient to maintain them, a withdrawal by exporters from the market would again have a softening effect.

Regardless, however, of what the future holds in store, the spot market was on an upward trend. Compared to the opening of the market Monday, when 58-60 U. S. Motor was available at 8¾ to 9 cents, refiners were moving it today at 9¼ cents, and some had advanced to 9½ cents. Several marketers purchased yesterday at 9 cents for shipment over the remainder of November, evidencing their faith in the future market, but goods below 9¼ cents today were difficult to find.

Other heavy grades had advanced proportionately, and 56-58, 450, production and demand for which have declined, was quoted today at 8¾ to 9 cents, with comparatively few sales above 8¾ cents for prompt shipment. The 60-62, 400 end point continued in good demand, and the minimum price represented a gain of ¼ cent over the week. It was held today at 11 to 11¼ cents.

Export Prices Stiffer

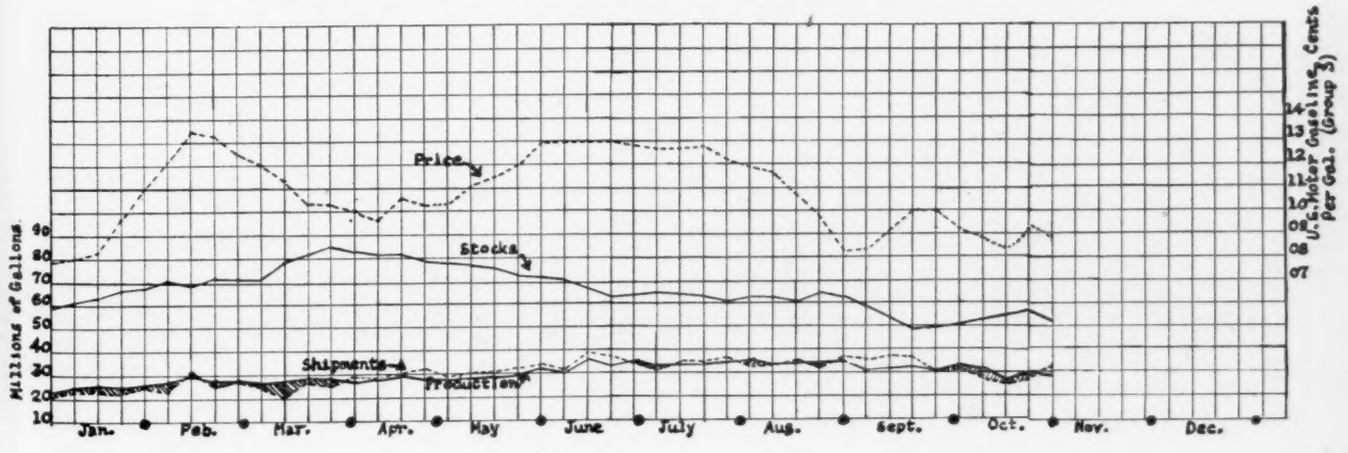
Most refiners now demand 12¼ cents or more for 64-66, 375 end point for either spot or November delivery. One exporter reported a fair sized purchase at mid-week below 12 cents but a continuation of export demand and the belief that refiners would be afforded further outlet from this source caused prices to stiffen fully ¼ cent.

With all heavy grades in north Texas generally higher than Group 3, and the higher gravities at least on a par, Oklahoma refiners have had little competition from that district. According to all reports production of north Texas heavy gasolines has been at a minimum because refiners have devoted attention to high gravities, and 58-60 U. S. Motor was mostly held in that market at 9¼ to 9½ cents over the week.

Practically no change was effected in prices of natural gasoline with the exception of Grade C. Due to its scarci-

(Continued on page 157)

Barometer of the Mid-Continent Gasoline Market



A "Popular Selection" of 3 Cleveland Steel Barrels

for shipping gasoline, paint, oil, alcohol, turpentine, etc.

Light Shipper

The popular and ideal barrel for shipping and storage.

This barrel is built for real service and tested, assuring you against any loss in shipment of your product.

Furnished in all standard sizes.

An Exceptionally Sturdy Barrel

An especially durable barrel for long and continued service.

Note the heavy reinforced chimes and rolled-in beads. A strong rigid barrel that complies with I. C. C. Specifications No. 5-B.

A COMPLETE LINE

Whatever your barrel needs,—there's a Cleveland Steel Barrel. Let us quote you on your requirements.

An Extra Heavy I. C. C. Barrel

Adapted for shipment of gasoline, inflammable oils and liquids.

Equipped with separate I-Bar rolling hoops. Complies with I. C. C. Specifications No. 5.

The Cleveland Steel Barrel Co.
Cleveland, Ohio

Cleveland STEEL BARRELS

Refinery Markets on Light Oils and Lubricants

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices Nov. 9	Prices Nov. 2	Prices Oct. 26
52-54 Naphtha	11¼–11½	11 –11¼	11 –11¼
54-56 Naphtha	11¾–12	11½–11¾	11½–11¾
58-60 Gasoline	12 –12¼	11¾–12	11¾–12
60-62 Straight-run gasoline	12½–13	12¼–13	12½–13
62-64 Straight-run gasoline	13½–14	13½–14¼	13½–14
64-66 Straight-run gasoline	14¾–15	14¾–15½	14½–15
68-70 Straight-run gas. 350 E.P.	–16½	–16½	16 –16½
68-70 Straight-run gas. 305-320 E.P.	–19	–19¾	–18
70-72 Straight-run gas. 300-305 E.P.	–20	–21	–20
OKLAHOMA			
48-50 450 E. P. naphtha	8½– 8¾	8 – 8¼	– 8¼
50-52 450 E. P. naphtha	8½– 8¾	8 – 8¼	– 8¼
56-58 450 E. P. gasoline	8¾– 9	8¼– 8½	8½– 8¾
56-58 U. S. Motor gasoline	9 – 9¼	8½– 8¾	8¾– 9
58-60 U. S. Motor 437 E. P.	9¼– 9½	8¾– 9	9 – 9¼
60-62 400 E. P. gasoline	11 –11¼	–10¾	10¾–10¾
64-66 375 E. P. gasoline	12 –12¼	–12	11¾–12
68-70 350-360 E. P. gasoline	13¼–13½	13 –13½	13 –13¼
KANSAS*			
56-58 450 E. P. gasoline	8¾– 9	8½– 8¾	8¾– 9
58-60 U. S. Motor gasoline	9¼– 9½	9 – 9¼	9¼– 9½
60-62 400 E. P. gasoline	11½–11¾	11¼–11½	–11
64-66 375 E. P. gasoline	12½–12¾	12¼–12½	–12¼
*F. O. B. refinery, Kansas destination.			
NORTH TEXAS			
48-52 450 E. P. naphtha	– 8¼	8 – 8¼	8 – 8¼
56-58 450 E. P. gasoline	8¾– 9	– 8¾	– 8¾
58-60 450 E. P. gasoline	9 – 9⅛	8⅞– 9	– 9
58-60 U. S. Motor gasoline	9¼– 9⅜	9⅛– 9¼	– 9¼
60-62 400 E. P. gasoline	10⅞–11⅛	10½–10⅝	10½–10¾
64-66 390 E. P. gasoline	–12	11¾–12	11½–11⅝
64-66 375 E. P. gasoline	–12¼	12 –12¼	11¾–11⅞
68-70 350-360 E. P. gasoline	13¼–13½	13 –13¼	–13
NORTH LOUISIANA			
58-60 U. S. Motor 437 E. P.	– 9¾	9¼– 9½	9⅜– 9½
ARKANSAS			
58-60 450 E. P. gasoline	– 9½	9 – 9¼	9 – 9¼
58-60 U. S. Motor gasoline	– 9¾	9¼– 9½	9¼– 9½
64-66 375 E. P. gasoline	12½–12¾	–12¼	11¾–12
CALIFORNIA			
54-56 U. S. Motor gasoline	– 9	– 9	– 9
42-45 Engine distillate, 445-480 E.P.	6¼– 7	7 – 8	7 – 8

Note: This is without the 2-cent state tax included in the price of California refiners for shipments within the state.

NEW ENGLAND
(F. O. B. Boston and Fall River)

U. S. Motor gasoline	–11¾	–12	12½–13

NATURAL GASOLINE

(Note: End point of all grades, not over 375°F.)

OKLAHOMA			
Grade Double A	–11½	11½–11¾	12 –12¼
Grade A	–11½	11½–11¾	12 –12¼
Grade Double B	–11	11 –11¼	11¾–12
Grade B	–11	11 –11¼	11¾–12
Grade C	9¾– 9⅞	10¼–10½	11½–11¾

NOTE—Specifications adopted by Ass'n of Nat. Gaso. Manufacturers
Grade Double A—80-87.9 gravity, 90% recovery, not over 375 E. P.
Grade A—72-79.9 gravity, 90% recovery, not over 375 E. P.
Grade Double B—84-92 gravity, 85% recovery, not over 375 E. P.
Grade B—76-83.9 gravity, 85% recovery, not over 375 E. P.
Grade C—80-90 gravity, 78% recovery, not over 375 E. P.

NORTH TEXAS			
*Grade Double A	–11½	11⅝–11¾	12 –12¼
*Grade A	–11½	11⅝–11¾	12 –12¼
*Grade Double B	–11	11 –11¼	11¾–12
*Grade B	–11	11 –11¼	11¾–12
Grade C	9½– 9¾	10¼–10½	11½–11¾

*F. O. B. Breckenridge.

CALIFORNIA			
73-78 375 E. P.	12½–13	12½–13	12½–13
PENNSYLVANIA			
68-70 Grav. 437 E. P.	13½–14	13¾–14¼	13¾–14¼
64-66 Grav. 437 E. P.	13¼–13¾	13½–13¾	13½–14
60-62 Grav. 437 E. P.	12¾–12½	12½–12½	12¾–12½
68-70 Grav. 420 E. P.	13¾–14¼	14½–15	–14¾

BURNING OILS

PENNSYLVANIA			
45 Water White Kerosene	– 6¾	– 6¾	6¾– 7
46 Water White Kerosene	– 7¼	– 7¼	7¼– 7½
47 Water White Kerosene	7¾– 8	– 7¾	7¾– 8
300 Burning Oil	7½– 7¾	– 7½	– 7½
OKLAHOMA			
41-43 Water White Kerosene	4⅞– 5	4¾– 5	4¾– 5
42-44 Water White Kerosene	5¼– 5½	5¼– 5½	5⅛– 5½
KANSAS			
41-43 w. w. kerosene	5¼– 5¾	5¼– 5½	5½– 5¾
NORTH TEXAS			
41-43 Water White Kerosene	4⅞– 5	4¾– 4⅞	4¾– 5
42-44 Water White Kerosene	– 5¼	5¼	– 5¼

NORTH LOUISIANA	Prices Nov. 9	Prices Nov. 2	Prices Oct. 26
41-43 Water White Kerosene	5¼– 5½	5 – 5¼	5 – 5¼
ARKANSAS			
41-43 Water White Kerosene	5¼– 5½	5¼– 5½	5¼– 5½
CALIFORNIA			
40-42 Water White Kerosene	7½– 8	7½– 8	7½– 8
NEW ENGLAND			
40-43 Water White Kerosene	– 7	– 6¾	– 6¾

NEUTRAL OILS

PENNSYLVANIA			
(Viscosity at 70° F.)			
220 Vis. No. 3 Assoc. Filt.	–26	–25	–25½
200 Vis. No. 3 Assoc. Filt.	–23½	–23	–24
180 Vis. No. 3 Assoc. Filt.	–21¾	–21	–20½
150 Vis. No. 3 Assoc. Filt.	–17	–17	–17
(Non-Viscous)			
34 Grav. 350-360 Flash	– 7½	– 7½	– 7½
36 Miners Neutrals 300-305 Flash	– 6½	– 6½	– 6½
OKLAHOMA			
(Viscosity at 100°F.)			
100 Vis. No. 2 color	5½– 8	– 5½	– 5½
100 Vis. No. 2½-3 color	– 8¼	– 8¼	– 8¼
150 Vis. No. 3 color	9 –10	9 –10	9 –10
150 Vis. No. 4 color	– 8¾	– 8¾	– 8¾
180 Vis. No. 3 color	9¾–10¼	9¾–10¾	9¾–10¾
180 Vis. No. 4 color	9½–10½	9½–10½	9½–10½
180 Vis. No. 5 color	– 9¾	– 9¾	– 9¾
200 Vis. No. 3 color	10¾–11½	10¾–11¾	10¾–11¾
200 Vis. No. 4 color	–10½	–10½	–10½
200 Vis. No. 5 color	9½–10½	9½–10½	9½–10½
220 Vis. No. 3 color	–11¾	11¾–12½	11¾–12½
220 Vis. No. 4 color	12 –12¼	12 –12¼	12 –12¼
220 Vis. No. 5 color	–11¾	–11¾	–11¾
240 Vis. No. 3 color	–14	–14	–14
240 Vis. No. 4 color	–13½	–13½	–13½
240 Vis. No. 5 color	–13	–13	–13
280 Vis. No. 3 color	–16	–16	–16
280 Vis. No. 4 color	–15½	–15½	–15½
280 Vis. No. 5 color	–15	–15	–15
300 Vis. No. 5-6 color	17 –17½	–17	–17
GULF COASTAL			
(Viscosity at 100°F; cold test 0)			
100 Vis. No. 2 Color Unfilt. Pale	7½– 8	7¾– 8	7½– 8
200 Vis. No. 3 Color Unfilt. Pale	12 –12½	12 –12½	12 –12½
300 Vis. No. 3 Color Unfilt. Pale	13½–14	13½–14	13½–14
500 Vis. No. 3½ Color Unfilt. Pale	15½–16	15½–16	15½–16
750 Vis. No. 4 Color Unfilt. Pale	20 –20½	20 –20½	20 –20½
200 Vis. No. 5½ Color Red Oil	10½–11	10½–11	10½–11
300 Vis. No. 5½ Color Red Oil	12½–13	12½–13	12½–13
500 Vis. No. 6 Color Red Oil	14 –14½	14 –14½	14 –14½
750 Vis. No. 6 Color Red Oil	18 –18½	18 –18½	18 –18½
CALIFORNIA			
(Viscosity at 100°F.)			
100 Vis. No. 2 color	13½–14½	13½–14½	13½–14½
100 Vis. No. 3 color	9 –10	9 –10	9 –10
200 Vis. No. 3 color	14½–15½	14½–15½	14½–15½
300 Vis. No. 3 color	14 –16	14 –16	14 –16
450 Vis. No. 3½ color	19½–20½	19½–20½	19½–20½
550 Vis. No. 3 color	21½–22½	21½–22½	21½–22½
600 Vis. No. 3½ color	23½–24½	23½–24½	23½–24½
100 Vis. No. 5 color	8 – 9	8 – 9	8 – 9
200 Vis. No. 5 color	13½–14½	13½–14½	13½–14½
300 Vis. No. 5 color	14 –15	14 –15	14 –15
400 Vis. No. 5 color	16 –17	16 –17	16 –17
500 Vis. No. 5 color	17 –18	17 –18	17 –18
600 Vis. No. 6 color	18 –19	18 –19	18 –19
700 Vis. No. 7 color	19½–20½	19½–20½	19½–20½

CYLINDER STOCKS

OKLAHOMA			
190-200 Vis. at 210° Bright Stock	30 –35	30 –35	30 –35
150-160 Vis. at 210° Bright Stock	27 –31	27 –31	27 –31
600 E Stock, 140-150 Vis. @ 210°	18 –20	18 –20	18½–20
600 Steam Refined Olive Green	7½–10	7½–10	7½–10
600 Steam Refined Dark Green	5¼– 6	5¼– 6	5¼– 6
Black Oil	4¾– 5	4¾– 5	4¾– 5
PENNSYLVANIA			
(1-inch Immersion Test)			
600 Steam Refined	15½–16	15½–16	15½–16
635 Steam Refined	19 –20	19 –20	19–20
650 Steam Refined	21 –22	21½–22	–22
600 Flash	25½–26	–26	–26
600 Warren E	–22	–22	–22
600 Oil City E	–21½	–21½	–21½
600 Filtered D	–26½	26½–27½	–27½
Cold Test Stocks (bright filtered)	–39	–39	–39
Cold Test Stock (dark filtered)	–37	–37	–37
Black Oil	– 8	– 8	– 8

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher.)

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

Day and Night

Night is the same as day, when it comes to delivering efficient service to customers from Waite Phillips Okmulgee and Wichita refineries. These modern plants operate 24 hours a day to supply the demand for PHILLIPS Higrade Petroleum Products.

OKMULGEE REFINERY

GASOLINE PHILLIPS HIGRADE PRODUCTS **MOTOR OILS**

WAITE PHILLIPS COMPANY

PRODUCERS ~ REFINERS ~ MARKETERS

TULSA OKLA.

Refinery Markets on Wax and Heavy Oil Products

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

WAX

PENNSYLVANIA	Prices Nov. 9	Prices Nov. 2	Prices Oct. 26
(Per Pound New York)			
122-124 White Crude Scale..	– 5¾	– 5¾	– 5¾
124-126 White Crude Scale..	– 5⅞	– 5⅞	– 6
OKLAHOMA			
(Per Pound Group 3)			
124-126 White Crude Scale..	5⅜– 5½	5⅜– 5½	5¼– 5½
CALIFORNIA			
White Crude Scale.....	7½– 8	7½– 8	7½– 8
(San Joaquin Valley, San Francisco 4c per bbl. more.)			

FUEL OIL

PENNSYLVANIA			
36-40 Fuel Oil.....	5½– 5¾	5½– 5¾	5½– 5¾
30-34 Fuel Oil.....	5¼– 5½	– 5¼	– 5¼
28-30 Fuel Oil.....	5 – 5¼	– 5	– 5
OKLAHOMA			
38-40 Straw distillate.....	3⅞– 4⅛	3⅞– 4	3¾– 4
36-38 Straw distillate.....	3¾– 3⅞	3⅝– 3¾	3⅝– 3¾
32-36 Gas oil.....	3⅜– 3½	3¼– 3½	3⅜– 3¼
26-30 Fuel oil (Bbl.).....1.25	–1.27½	1.15 –1.17½	1.10 –1.12½
24-26 Fuel oil (Bbl.).....1.20	–1.22½	1.12½–1.15	–1.07½
18-22 Fuel oil (Bbl.).....1.15	–1.20	–1.10	–1.05
KANSAS*			
38-40 Light straw distillate..	4⅛– 4¼	4 – 4¼	4 – 4¼
36-38 Light straw distillate..	– 4	3⅞– 4	3⅞– 4
32-36 gas oil.....	3½– 3¾	– 3½	3¼– 3⅜
24-26 Fuel oil..... 1.25	–1.30	1.20 –1.25	1.15 –1.20
26-30 Fuel oil.....	–1.30	1.25 –1.30	1.20 –1.25

*F. O. B. refinery, Kansas destination.

NORTH TEXAS	Prices Nov. 9	Prices Nov. 2	Prices Oct. 26
36-40 Straw Distillate.....	3¾– 3⅞	3¾– 3¾	3¾– 3¾
32-36 Gas Oil (Gal.).....	3¾– 3½	3¼– 3¾	3⅜– 3¼
24-26 Fuel, per bbl.....1.25	–1.30	1.25 –1.30	1.10 –1.15
GULF COASTAL			
Fuel.....1.45	–1.50	1.45 –1.50	1.45 –1.50
Gas Oil.....	4½– 4¾	4½– 4¾	4½– 4¾
NORTH LOUISIANA			
32-36 Light Gas Oil (Gal.)...	– 3½	– 3½	– 3¼
18-22 Fuel Oil (Bbl.).....1.00	–1.05	1.00 –1.05	1.00 –1.05
ARKANSAS			
32-36 Gas Oil.....	– 3½	3½– 3¾	– 3½
CALIFORNIA*			
14-18 Fuel Oil (Bbl.).....1.00		1.00	1.20
14-18 Bunker Oil (Bbl.).....1.00		1.00	1.20
24-30 Gas Oil (Bbl.).....1.15		1.15	1.45
27 + Diesel Oil (Bbl.).....1.15		1.15	1.45

*Prices at southern California points. Prices at San Francisco and other coast points 5c per bbl. higher. San Joaquin Valley 10c per bbl. less.

NEW ENGLAND (F. O. B. Boston and Fall River)			
30-32 gas oil (gal.).....	– 5¼	– 5¼	– 5¼
Fuel Oil (Bunker C) bbl.....	–1.67	–1.67	–1.65

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

(Continued from page 153)

ty, Grade A held at 11½ to 11¾ cents and some shopping was required to find it for quick shipment. Grade B was quoted at 11 to 11¼ cents although at the week-end manufacturers found it more difficult to secure 11¼.

Cool weather has increased production of Grade C, and this with a generally sluggish market forced prices downward to 9¾ and 10 cents, which represented a loss of ½ cent during the past six days. Continued export buying of refinery gasoline has not increased demand for naturals, and the average differential between U. S. Motor and Grade C approximated ½ cent today.

Differ About Contracts

Regarding contracts for next year some manufacturers have found that eastern refiners were not willing to contract on a basis of the spot market due to the great difference between U. S. Motor and natural gasoline prices this year. A few refiners seemed willing to pay a price equal to the spot market for U. S. Motor, but manufacturers generally were not inclined to accept this sort of contract, nor were they agreeable to contracting on a tank wagon basis.

Kerosene movement continues satisfactory to refiners and further strength is developing in that product. One of the largest refiners who held 41-43 water white at 4¾ cents for the last week or 10 days advanced to 4⅞ cents and many found no difficulty in obtaining 5 cents or more from the trade. The 42-44 water white went to the trade at 5½ cents, and marketers were able to shade 5¼ cents on scattered lots.

Fuel Buying is Active

According to many refiners it is not to be expected that fuel oil prices will offer any better inducements to buyers over the remainder of this year than prevail at present. Buying has been active this week, and many refiners said they were practically sold up for the time being, with others well taken care of over the balance of the month. A tight market prevails, and carload marketers have taken a heavy volume of fuel on a speculative basis. Prices advanced almost daily.

Several refiners reported that a very great portion of their fuel business was through carload marketers and this fact has caused some uncertainty as to future prices. It is argued that since such a large volume of fuel oil is held by marketers who bought at 5 to 10 cents per barrel below the present market, any period of temporary dullness would find the marketer pushing his fuel into the market at concessions in order to keep it moving.

According to buyers, the 24-26 product was practically unobtainable today. Odd lots moved at $1.20, and refiners asked $1.25 for shipment over remainder of November. The 18-22 held at a minimum of $1.15 in the spot market, with quotations upward to $1.20 over November, although several of the larger refiners today said they had taken no business above $1.15.

Lubricating oils were steady, and good movement of cylinder stocks is reported. One train load of 600 steam refined olive green goods went for export at an approximate price of 7½ cents, and one important refiner has not yet met the recent general reduction in neutral oils, claiming his business at present prices was sufficient to warrant maintaining them.

Wax was quoted at 5½ cents by practically all refiners, and the last reported sales were made at 5⅜.

All prices and market information printed herein have been gathered by the staff of National Petroleum News from reliable sources and so far as can be ascertained thoroughly represent the going market as defined for each product on the date given for those particular prices. Both buyers and sellers have been checked in the gathering of this information and actual sales studied.

These prices and this information are subject at all times to correction for errors. Anyone having knowledge of any facts which would indicate anything different from the information which is given, is especially urged to send in those facts to the head office of National Petroleum News at once, or take them up with the nearest representative. All such facts will be promptly and thoroughly investigated.

The staff of National Petroleum News is cognizant of the fact that this market information has come to have a high standing in the industry. It wants to not only maintain that standing, but to improve it and to that end, invites the co-operation of the entire oil industry.

Bull Movement Affects Entire Oil Line in Chicago Market

Staff Special

CHICAGO, Nov. 7

A STRONG bull movement was the feature of the Chicago resale market this week. Bad weather which characterized the last week of October is generally considered responsible for the market depression that continued into the early days of this month. It caused jobbers to slacken their spot purchases, and probably influenced carload marketers to unload their "long" holdings at sacrifice prices between Oct. 25 and 30. That depression seems to have been overcome.

During the first week of November, Standard Oil Co. of Indiana territory was almost free of bad weather. At some time or another during the week, the whole region received a shower but most of the middle west had five fine autumn days out of seven, and roads have been good. This stimulated gasoline consumption just enough to fortify the refiners in the belief that the spot gasoline market was due for an advance. From a minimum of 8¾ cents a gallon at the end of last week the U. S. Motor gasoline price climbed to a minimum of 9¼ today, and some refiners ask 9½ cents.

A review of the Chicago situation shows this bull movement is not a reflection of a sharp demand. There has been some buying but it has not been brisk. Refiners and marketers generally attribute the condition to strength in the field. Refiners have been curtailing their runs, some of the larger ones holding down to 50 per cent of capacity, and that alone would put them in a position to control their own quotations, but in addition to that, many of them have not been cutting so much 58-60 goods.

The tendency of Group 3 refiners to cut high gravity seasonal gasolines, and at the same time increase their output of domestic fuel products, has reduced the volume of Motor gasoline available. Also within the last two weeks exporters have come into the southwestern fields and cleaned out most of the 64-66 gasoline. North Texas refiners are entirely out of 64-66, according to information circulated here, and there are only two or three refiners in Oklahoma with any to offer. One refiner reports he refused to sell 68-70 at 13½ cents.

Kerosene prices have moved upward since last week, but the advance has not been great. The strength of kerosene likely is based on advances in distillate prices. No kerosene is available now under 5 cents a gallon and 5¼ is the more general price for 41-43 while 42-44 is bringing 5½ cents, especially to refiners that specialize on a quality kerosene. Naturally, premium kerosene is more in demand during winter than when the consumption is greatest in crop times. Appearance and smell of kerosene is more of a factor in the market when the consumer is buying for small heaters and lamps than when he is buying tractor fuel.

Oils suitable for burning in home furnaces and other small heating plants although showing a more active demand, have not turned up sharply in price since last week. Distillate of 38-40 gravity is still quoted at 4 to 4¼ cents a gallon and 4¼ cents is demanded chiefly by refiners who are offering goods of zero cold test or with a flash point of 180° and below. Goods with a flash around 200° can be bought for 4 cents. Gas oil is up ¼ cent since last week and the demand is good at 3½ cents for the dark and 3⅝ for the straw.

Fuel oil is up from 2 to 5 cents a barrel over last week. This is probably due as much to demand as to scarcity. Calls for heavy fuels have been fairly numerous, big industrial buyers prefering to carry full storage in view of the cloud that hangs over the coal market. Refinery fuel of 24-26 gravity is difficult to locate, even by refiners offering $1.20 to $1.25 a barrel for cracking material. The heavier 18-22 gravity stuff is quoted generally at $1.17 to $1.20 but some refiners are quoting out of the market on that product, holding for $1.25. Smackover crude fuel too has caught the bull movement and is being quoted to the trade at $1.10 a barrel flat.

PLATT'S

OILGRAM

Petroleum Markets-Every Day

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Week's Price Changes Tank Wagon Market

Gasoline Changes

Standard of New York—T.w. and s.s. reduced 2 cents, in Maine and New Hampshire only, **Nov. 5.**

Standard of Indiana—T.w. and s.s. reduced 1 cent, Huron, S. D., to 16 cents and 18 cents respectively, **Oct. 29**; and cut 1 cent at Evansville, Ind., to 18 cents and 20 cents respectively, **Oct. 24.**

Canadian—S.s. prices only cut 1 cent at Halifax, N. S., and Quebec City, Que., to 30 cents and 31 cents respectively, account of price wars among retailers.

Kerosene Changes

Standard of New Jersey—T.w prices advanced ½ cent throughout territory, excepting at Baltimore, Md., **Nov. 3.** T.w. prices reduced ½ cent, North and South Carolina, **Nov. 4.**

Standard of New York—T.w. advanced 1 cent, New York and New England, **Nov. 5.**

Standard of Indiana—T.w. reduced 1 cent, Kansas City, 7.3 cents, **Oct. 9.**

Standard of Louisiana—T.w. advanced ½ cent throughout territory, **Nov. 3.**

Magnolia Petroleum—T.w. reduced 1 cent, to 11 cents, Tulsa, **Oct. 27.**

Indiana Jobbers Announce Program

INDIANAPOLIS, Nov. 7.—The tentative program for the annual meeting of the Indiana Independent Petroleum Marketers' Association, which will be held on Dec. 9 at either the Columbia Club or the Indianapolis Athletic Club, includes:

L. P. Nicholas, president of the National Petroleum Marketers' Association, Chicago; C. H. Chalmers, president of the American Oil Burner Association, New York City and Warren C. Platt, publisher of National Petroleum News. The Governor of Indiana will address the meeting on questions of state-wide importance.

The one-day meeting will close with a banquet in the evening for members and their wives. During the banquet, an address will be delivered by the Governor of Indiana.

An invitation is extended by W. H. Trimble, president of the association, on behalf of the association for all refinery representatives and jobbers to attend.

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

BELOW are given in cents a gallon, the tank wagon price of gasoline without the special taxes levied against motor fuels by many states, the amount of the state taxes, the total tank wagon price, with tax added in and the service station or retail price of gasoline as quoted by the Standard Oil Companies in their various marketing territories. The right hand column is the tank wagon price of kerosene. By tank wagon price is meant the price to resale agents or dealers.

These Prices in Effect November 9, 1925

S. O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Atlantic City, N. J.	15	0	15	*	13
Newark, N. J.	15	0	15	17	13
Annapolis, Md.	15	2	17	*	12.5
Baltimore, Md.	15	2	17	20	10
Cumberland, Md.	15	2	17	20	12.5
Washington D. C.	15	2	17	20	11.5
Danville, Va.	15	3	18	*	13.5
Norfolk, Va.	15	3	18	21	13.5
Richmond, Va.	15	3	18	21	13.5
Roanoke, Va.	15	3	18	21	13.5
Petersburg, Va.	15	3	18	*	13.5
Williamsburg, Va.	15	3	18	*	13.5
Charleston, W. Va.	15	3½	18.5	21.5	13.5
Clarksburg, W. Va.	15	3½	18.5	21.5	13.5
Keyser, W. Va.	15	3½	18.5	*	13.5
Parkersburg, W. Va.	15	3½	18.5	21.5	13.5
Wheeling, W. Va.	15	3½	18.5	21.5	13.5
Charlotte, N. C.	15	4	19	22	13
Hickory, N. C.	15	4	19	*	13
High Point, N. C.	15	4	19	*	13
Mt. Airy, N.C.	15	4	19	*	13
Salisbury, N. C.	15	4	19	*	13
Charleston, S. C.	15	5	20	23	13.5
Columbia, S. C.	15	5	20	23	13.5

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

*New York City	17	0	17	21	14
Albany, N. Y.	†18	0	†18	†20	14
Buffalo, N. Y.	14	0	14	17	14
Rochester, N. Y.	†14	0	†14	†18	14
Syracuse, N. Y.	16	0	16	18	13
Boston, Mass.	16	0	16	20	12
Augusta, Me.	16	3	19	22	14
Manchester, N. H.	16	2	18	22	14
Burlington, Vt.	16	2	18	21.5	14

*In steel barrels.
†At Rochester and Albany, Standard sells two grades of gasoline, the above price applying to its Socony grade, and another grade being sold 2c below this price.

ATLANTIC REFINING

Pittsburgh, Pa.	17	0	17	*22	13
Philadelphia, Pa.	17	0	17	*22	13
Allentown, Pa.	17	0	17	*22	13
Erie, Pa.	17	0	17	*22	13
Scranton, Pa.	17	0	17	*22	13
Altoona, Pa.	17	0	17	*22	13
Dover, Del.	17	2	19	22	13
Wilmington, Del.	17	2	19	22	13
Providence, R. I.	16	1	17	20	13
Springfield, Mass.	16	0	16	19	13
Worcester, Mass.	16	0	16	19	13
Hartford, Conn.	16	2	18	21	12
New Haven, Conn.	16	2	18	21	13
Boston, Mass.	16	0	16	19	13

*Contains 2-cent tax collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	15	3	18	21	14
Louisville, Ky.	17	3	20	23	12
Covington, Ky.	16	3	19	22	14
Clarksdale, Miss.	16	3	19	22	12
Jackson, Miss.	16	3	19	22	11
Natchez, Miss.	15.5	3	18.5	21.5	11.5
Vicksburg, Miss.	15.5	3	18.5	21.5	11.5
Birmingham, Ala.	17	2	19	22	14.5
Mobile, Ala.	16	2	18	21	11
Montgomery, Ala*	18	2	20	23	15.5
Atlanta, Ga.	17.5	3½	21	24	13
Augusta, Ga.	18.5	3½	22	25	14.5
Macon, Ga.	18.5	3½	22	25	13.5
Savannah, Ga.	13.5	3½	17	20	13
Jacksonville, Fla.	16	4	20	23	13
Miami, Fla.	18	4	22	25	14.5
Tampa, Fla.	16	4	20	23	13
Pensacola, Fla.	16	4	20	23	13.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

S. O. INDIANA

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Chicago, Ill.	†16	0	†16	18	11
Decatur, Ill.	11	0	11	13	11.5
E. St. Louis, Ill.	15.1	0	15.1	17.35	10.6
Joliet, Ill.	16.4	0	16.4	18.4	11.7
Peoria, Ill.	10.5	0	10.5	12.5	11.5
Quincy, Ill.	16.2	0	16.2	18.2	11.3
Indianapolis, Ind.	16.2	3	19.2	21.2	11.7
Evansville, Ind.	15	3	18	20	11.5
South Bend, Ind.	16.4	3	19.4	21.4	11.9
Detroit, Mich.	16.8	2	18.8	20.8	12.2
Grand Rapids, Mich.	16.7	2	18.7	20.7	12.1
Saginaw, Mich.	16.9	2	18.9	20.9	12.3
Madison, Wis.	16.3	2	18.3	20.3	11.5
Milwaukee, Wis.	16.1	2	18.1	20.1	11.3
La Crosse, Wis.	17.2	2	19.2	21.2	12.4
Minneapolis, Minn.	13.2	2	15.2	17.2	12.6
Duluth, Minn.	13.5	2	15.5	17.5	12.6
Mankato, Minn.	17.1	2	19.1	21.1	12.4
Des Moines, Iowa	13.5	2	15.5	17.5	11.9
Davenport, Iowa	16.5	2	18.5	20.5	11.9
Sioux City, Iowa	16	2	18	20	11.5
Mason City, Ia.	16.5	2	18.5	20.5	11.9
St. Louis, Mo.	**15.6	2	17.6	19.9	11
Kansas City, Mo.	††13.9	2	15.9	17.9	7.3
St. Joseph, Mo.	**16	2	18	20	10.9
Fargo, N. D.	18.9	1	19.9	21.9	14.6
Grand Forks, N. D.	19.2	1	20.2	22.2	14.9
Minot, N. D.	18.9	1	19.9	21.9	14.6
Pierre, S. D.	18	3	21	*	13.1
Huron, S. D.	13	3	16	18	13.1
Wichita, Kans.	8.8	2	10.8	12.8	10.8
Bartlesville, Okla.	13.9	3	16.9	18.9	9.9

†Dumps of 100 or more gallons at 15c per gallon.
*S. O. Indiana does not operate station.
**Includes city tax of ½c.
††Includes city tax of 1c.

S. O. NEBRASKA

Crawford, Neb.	17	2	19	*	12.25
Omaha, Neb.	10	2	12	14	11.5
McCook	17.75	2	19.75	21.75	13
Norfolk	16.75	2	18.75	20.75	12
North Platte	17.75	2	19.75	21.75	12.75
Scotts Bluff	17.25	2	19.25	21.25	12.25

*Standard has no service station here.

CONTINENTAL OIL

Denver, Colo.	16	2	18	20	14.5
Pueblo, Colo.	16	2	18	20	14.5
Casper, Wyo.	17	2½	19.5	21.5	13
Cheyenne, Wyo.	17	2½	19.5	21.5	14.5
Butte, Mont.	19	2	21	21	16
Helena, Mont.	21	2	23	25	17
Salt Lake City, Utah	18.5	3½	22	24	18
Boise, Ida.	20	3	23	25	20
Albuquerque, N.M.	20.5	3	23.5	26.5	16.5

S. O. CALIFORNIA

Phoenix, Ariz.	20	3	23	26	21.5
Los Angeles, Cal.	10.5	2	12.5	16.5	15.5
Fresno, Cal.	14.5	2	16.5	20.5	17.5
San Francisco, Cal.	14	2	16	20	15.5
Reno, Nev.	17.5	4	21.5	25.5	19
Portland, Ore.	14	3	17	21	16.5
Seattle, Wash.	14	2	16	20	16.5
Spokane, Wash.	18	2	20	24	20.5
Tacoma, Wash.	14	2	16	20	16.5

S. O. LOUISIANA

Little Rock, Ark.	12.5	4	16.5	19.5	10.5
Alexandria, La.	13	2	15	18	11.5
Baton Rouge, La.	12	2	14	17	10
Lake Charles, La.	13.5	2	15.5	18.5	11.5
New Orleans, La.	*13.5	2	15.5	18.5	10.5
Shreveport, La.	12	2	14	17	10.5
Lafayette, La.	13	2	15	18	11
Bristol, Tenn.	13.5	3	16.5	19.5	13
Chattanooga, Tenn.	12	3	15	18	13
Knoxville, Tenn.	13	3	16	19	13.5
Nashville, Tenn.	12	3	15	18	13
Memphis, Tenn.	10.5	3	13.5	16.5	12.5

*Includes 1c city tax on gasoline and kerosene.

S. O. OHIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
All Ohio points	16	2	18	20	13

MAGNOLIA PETROLEUM

Muskogee, Okla.	14	3	17	20	11
Oklahoma City	14	3	17	20	12
Tulsa, Okla.	14	3	17	20	11
Fort Smith, Ark.	14	4	18	21	11
Little Rock, Ark.	12.5	4	16.5	19.5	10
Texarkana, Ark*	15	4	19	23	12
Dallas, Tex.	16	1	17	19	11
El Paso, Tex.	17	1	18	19	13
Fort Worth, Tex.	13	1	14	16	10
Houston, Tex.	16	1	17	19	12
San Antonio, Tex.	12	1	13	15	10

*Within city of Texarkana, Ark., the state tax on gasoline is 1c per gal. conforming with the Texas state tax. In Texarkana district outside of the city the 4c state tax applies.

V. M. & P. NAPHTHA

Changes ordinarily occur coincident with gasoline)

	Oleum Spirits	V.M.& P. Naphtha	Cleaners Naphtha
Chicago	18	20	20
Detroit	20.2	21.7	21.7
Kansas City	18.2	20.2	23.2
Milwaukee	18.2	22.7*	22.7*
Minneapolis	19.5	24*	24*
St. Louis	17.4	19.9	21.2
New York		19	

*Including state tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Toronto	23.5	3	26.5	30	20
Ottawa	24.5	3	27.5	31	21
Cochrane	28.5	3	31.5	39	24.5
Ft. William	27.5	3	30.5	34	22.5

MANITOBA

Winnipeg	27.5	3	30.5	34	22.5

SASKATCHEWAN

Regina	30.5	0	30.5	34	25.5

ALBERTA

Edmonton	30.5	2	32.5	36	27.5
Calgary	29.5	2	31.5	35	25.5

BRITISH COLUMBIA

Vancouver	21	3	24	28	23

QUEBEC

Montreal	23.5	3	26.5	30	20
Quebec City	25.5	3	28.5	31	22
Three Rivers	25.5	3	28.5	32	22

NEW BRUNSWICK

St. John	26.5	0	26.5	30	25
Moncton	26.5	0	26.5	30	25

NOVA SCOTIA

Halifax	26.5	0	26.5	30	23
Sydney	28.5	0	28.5	32	25

PRINCE EDWARD ISLAND

Charlottetown	26.5	2	28.5	33	23

Note: In districts surrounding these points 1c additional is added to city price.

Complete Export Markets

New York **Gulf Coast** **California**

Export Gasoline Market Irregular; Kerosene Is Stronger

By Special Correspondent
NEW YORK, Nov. 9.

FURTHER reductions in tank wagon market prices featured gasoline. Effective Nov. 5 Standard Oil Co. of New York reduced tank wagon and service station prices of motor gasoline 2 cents in Maine and New Hampshire. This brings the entire New England and New York state price, outside of Greater New York to 16 cents.

Kerosene is decidedly stronger, and the trade is predicting another 1 cent advance before the tenth of December. The present price is 14 cents. Bulk kerosene is stronger with water white up ½ cent at 7¼ cents refinery. Cased kerosene advanced ¼ cent.

The influx of Russian oil into all of the major European centers continues to gain. According to a preliminary report of the Soviet Oil Syndicate, exports of oil for the fiscal year ending Oct. 1 were 9,212,000 barrels, showing a gain of approximately 90 per cent over the previous year, and 44 per cent over 1913. Exports of fuel oil from Russia were 2,800,000 barrels or four times greater than in 1913 while gasoline exports of 1,900,000 barrels were almost double the pre-war figure. Kerosene, which before the war constituted 45 per cent of the exports, has slumped to 30 per cent while lubricating oils have declined from 26 per cent pre war to 13.7 per cent.

Gasoline—New York

Export demand for gasoline was better last week, and it is reported that a leading refiner sold a cargo of 45,000 barrels to a United Kingdom buyer for December shipment, but details were lacking. There was an inquiry from France for a cargo of 42,000 barrels of U. S. Motor, 64 gravity and prime and water white kerosene but this failed to materialize. Stocks of kerosene abroad are still low, owing to the hand-to-mouth buying that has been going on, and inquiries from most of the European buyers are for late November or early December shipment. Bulk gasoline is decidedly easier at local refineries and U. S. Motor is freely offered at 11 cents a gallon. The leading refiners, however, are still asking up to 11½ cents a gallon. Cased gasoline is a shade easier. However, no revisions have been announced, although export inquiries have been decidedly numerous of late. One small Independent reported a sale of 25,000 cases of U. S. Motor and 64-gravity to a near Eastern buyer for December shipment, while there was an inquiry in the market from Japan for 30,000 cases for December shipment. This is still hanging fire.

Gasoline—Gulf Ports

The Gulf gasoline market was irregular. With Mid-Continent gasoline on the upward swing, most of the exporters advanced their prices for U. S. Motor to 10¾ to 11 cents a gallon, but one factor was still quoting 10½ cents while 64 gravity ranged from 13¾ to 14½ cents a gallon. One of the leading Independents is working on a cargo of 50,000 barrels of 61-63 gravity and 64 gravity gasoline for late December shipment, presumably to the United Kingdom. This refiner quoted around 13¾ and 14¾ cents but has not yet closed the business. Another big Independent was working on a French inquiry for 45,000 barrels of U. S. Motor 64 gravity and prime and water white kerosene but this is also hanging fire. The holiday on Tuesday tended to restrict business.

Cased gasoline prices are unchanged and U. S. Motor is still held at $2.25 a case while 64 gravity is $2.55 a case in cargo lots. Demand is fair, and a large Independent is working on an order for 60,000 cases for nearby shipment to Australasia. There was an inquiry from the Near East for 20,000 cases of U. S. Motor and 64-gravity gasoline but this has not yet materialized.

Domestic Gasoline

The domestic market, locally, was easier, with jobbers showing little disposition to purchase ahead. Consumption is dropping and this along with the break in New England tank wagon prices, has created a bearish feeling among the smaller distributors. In tank cars at local refineries the price ranges from 11 to 11½ cents a gallon for U. S. Motor. The price in steel barrels to garages is 17 cents but service stations in some sections are buying at 13½ cents.

Kerosene—New York

Kerosene is decidedly stronger. Early in the week the Standard Oil Co. of New Jersey advanced cased kerosene ¼ cent a gallon, owing to the jump in bulk kerosene. The market is steadily strengthening. Export demand is better, although most of the sales reported have been for from 500 to 2000 cases, for nearby shipment to the west coast of Africa and the Near East.

Bulk water white at local refineries is unavailable below 7¼ cents a gallon while prime white is strong at 6¾ cents. Refiners are predicting higher prices soon. No bulk sales were reported but one of the leading refiners is reported negotiating for the sale of 45,000 barrels of prime and water white kerosene along with U. S. Motor gasoline for December shipment to the Continent.

Kerosene—Gulf Ports

The Gulf market for kerosene also was firmer. Prime white ranged from 5¾ to 7 cents a gallon at the close of the week. Refiners are very reluctant sellers even at the advanced prices, and the trade is predicting further advances before the end of the month. Cased kerosene is firm but unchanged at $1.60 for prime and $1.70 for water white in cargo lots. No sizable movements were reported.

Domestic Kerosene

Domestic demand for kerosene is much more spirited. Jobbers are stocking up for the winter and water white is firm at 8½ cents a gallon delivered in tank cars to the trade. The consensus of local opinion is that there will be another advance in the tank wagon price soon.

Bunker Oil—Gulf Ports

Bunker oil was advanced 10 cents a gallon, in the Gulf section on Thursday and all the leading factors are now asking $1.50 a barrel for grade C. However, at Tampico the price is still $1.40 a barrel including taxes while heavy Panuco crude oil has been marked up 5 cents and is now $1.20 taxes to be added.

Bunker Oil—New York

At New York harbor refineries grade C is strong at $1.65 a barrel. Diesel oil is moving in a larger way at $2.10 a barrel at the refineries.

Wax

Demand for fully refined and white crude scale waxes was more spirited. No export buying of consequence has

materialized, although Continental buyers are steadily inquiring. New York observers are of the belief that a good deal of the buying this week has been shorts scurrying to cover. As the week closed, white crude scale 122-124 A.m.p. was offered at 5⅞ cents. At the Gulf ports, 124-126 was 5.65 cents. At New York fully refined 125-127 A.m.p. is 6⅜ cents and 133-135 held at 6⅞ cents while at New Orleans 128-30 was 6¼ cents; 125-127 was 6⅛ cents and 133-135 held at 6½ cents. Match 105-108 A.m.p. was steady and unchanged at 6 cents a pound.

Lubricating Oils

Demand for lubricating oils has been hand-to-mouth throughout the week. Pennsylvania 600 s.r. in barrels, New York is freely offered at 23½ to 24 cents with export buyers showing little interest. There was a more active inquiry for this oil from French buyers but sales were confined to a few hundred barrels for prompt shipment. Neutral oils were quiet and unchanged. Paraffin oils are also marking time. The Gulf market for zero cold test oils is slightly firmer and underlying conditions are improving. An unconfirmed report current had it that one of the leading Independents sold an assorted cargo for nearby shipment to France but details were lacking.

Gas Oil

Gas oil demand is lagging. The improvement in fuel oils has failed to influence this market to any extent and locally 36-40 is freely offered at 5 cents a gallon, refinery while 28-34 is held at 4¾ cents a gallon. In the Gulf section 26-28 transparent is in slightly better demand at 4½ cents while 32 plus dark is weak at 4¼ cents.

Petrolatums

Petrolatums are slightly firmer, reflecting a better demand from domestic consumers. Stocks on hand are of fair proportions. The outlook is brighter, owing to the improved inquiry from abroad for the higher grades. Medicinal oils are dull and unchanged.

Pacific Export Market

Cargo lots quotations at seaboard, Los Angeles)

	Nov. 7	Oct. 31
Gasoline, U. S. Motor—54°—56°	7½- 9	7½- 9
Gasoline—U. S. Motor blends and special cuts	8 - 9½	8 - 9½
Gas Oil, 24°—30°B. per bbl	$1.15	$1.15
Diesel Oil, 27°B—plus per bbl	$1.15	$1.15
Bunker Oil, 14°—18°B. per bbl	$1.00	$1.00
Fuel Oil, 14°—18°B. per bbl	$1.00	$1.00
Kerosene, W. W. 40°—42° B per gal., 125-150 flash test	05 -06½	05 -06½
Cased Goods		
Gasoline, U. S. Motor	$2.25	$2.25
Kerosene, W. W. 40°—42° B per case, flash test 125-150	$1.40-1.50	$1.40-1.50

New York Export Market

Prices below are an index to the export markets as of the dates given. In many cases they are actual sales prices. So many factors enter into the price in export transactions that an actual market price governing the bulk of transactions cannot be given.

GASOLINE	Nov. 9	Nov. 2
U. S. Motor, Bulk, Ref	.11	-11
KEROSENE		
45-150 W. W. Bulk Ref	07¼-07½	-06¾
GAS OIL		
36-40, Bulk Refinery	-05	-05
28-34, Bulk Ref	-04¾	-04¾
BUNKER OIL		
Grade C, Ref....Bulk	1.65	-1.65
Diesel Oil Ref....Bulk	2.10	-2.10

LUBRICATING OILS

The following prices are cooperage basis f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS (bbls.) 1 inch Immersion Test				
Penna Filtered D 600	33		33	-33½
Penna. Filtered E 600	30			-30
Unfiltered 600 s. r	24			-24
Unfiltered 650 s. r	30			-30
600 flash s. r	33			-33
Penna. 630 Flash	42			-42
RED PARAFFIN (bbls.)				
300 vis. at 100°F....No. 5	21			-21
250 vis. at 100°F....No. 5	20			-20
High Viscosity Paraffin No. 5	26			-26
.885 s.g.pale 100 vis. at 100°F.	14½			-14½
Neutral Oils (bbls.)				
200 vis. at 70° F. Pale...No. 3	-31			-31
180 Pale..70.....No. 3	-28½			-28½
150 Pale..70.....No. 3	-25			-25
BLACK OIL (bbls.)				
25-30 cold test	.14	-15	14	-15
15 cold test	.15	-15½	15	-15½

MEDICINAL OILS (Cooperage Basis) (Penna. Stocks)	Nov. 9	Nov. 2
Domestic.875-.885s.g.drums	1.00-1.08	1.00-1.08
Domestic.865-.870s.g.drums	.75- .80	.75- 80
Russian.885-.890s.g.325-330 vis. drums	1.25-1.20	1.25-1.25

WAXES (Penna. Stocks) (F. A. S. Carload Lots)		
WHITE CRUDE SCALE		
122-124 A. m. p	05¾-05⅞	05¾-06
124-126 A. m.p	05⅞-06	-05¾
MATCH		
105-108 A. m. p	-06	-06
FULLY REFINED		
120-122 A. m. p	06¼-06¼	06 -06⅜
123-125 A. m. p. Philadelphia	06⅛ 06¼	-06⅛
125-127 A. m. p	06¼- ⅜	-06¾
128 130 A. m. p	06⅛ ½	-06⅜
130-132 A. m. p	06½ - ⅝	-06½
133-135 A. m. p	06⅞-07	06⅞-07
135-137 A. m. p	-07¼	-07¼
SEMI REFINED		
122-124 A. m. p	-05⅞	05⅞
YELLOW CRUDE SCALE		
124-126 A. m. p	05½ 05⅝	-05⅝
PETROLATUMS (Penna. Stocks)		
Dark Green	02¾	02¾
Veterinary	03⅛	03⅛
Light Amber	03½	03½
Dark Amber	03¼	03¼
Cream	06½	06½
Lily White	08⅛	08⅛
Snow White	10½	10½

N. Y. Export Quotations

Illuminating Oils
Standard Oil of New Jersey

	Nov. 9	Nov. 2
Bulk, gal., Bayonne	.....	.....
Barrels, gal., Bayonne, cargo	.....	.....
Cases, gal., Bayonne	17.15	16.90

Prices for water white oil (150 test) are 1 cent higher than those for standard white.

Gasoline-Naphtha
(Cents per Gallon)

U. S. Motor, dead bulk	.....	.....
U. S. Motor, cases	27.15	27.15
Export Naphtha bulk	.....	.....
*62-63 deg. bulk	.....	.....
66-68 deg. bulk	.....	.....

*Grade changed from 64-66 to 62-63 Jan. 9.

Tide Water Oil Company
(f. o. b. Bayonne)

58-59 deg. bulk	.....	.....
58-59 deg. cases	27.15	27.15
Export grade, U. S. Motor Specifications bulk	.....	.....
68-72 deg. bulk	.....	.....

	Bulk Barrels	Cases
Standard white 110	.....	17.15
Water white 150	.....	18.15

The Texas Company

Gasoline, cases	27.15	27.15

Kerosene	Bulk Barrels	Cases
Standard White	.....	17.15
Prime White	.....	17.65
Water White	.....	18.15

Gulf Export Market

Gasoline

	Nov. 9	Nov. 2
U. S. Motor, Cargo	10½-.11	10¾-.11
60-62 400 e. p. Bulk	.12¾	- 12¾
64-66, 385 e. p. Bulk	13¾-.14½	13¾- 14
U S. Motor, Cases (cargo lots)	2.25	2.25
64-66, Cases (cargo lots)	2.55	2.55
KEROSENE		
Water White, bulk	06¾-07	.06¾
Prime White, bulk	05¾-06	.05¾
Water White, cases (cargo lots)	1.70	1.70
Prime White, cases (cargo lots)	1.60	1.60
GAS AND BUNKER OIL		
26-28, gravity, bulk. Transp	04¼	-04¼
32 plus, bulk, Dark	04¼	-04¼
Grade C, Bunker oil	1 50	1.40-1.45
MEXICAN CRUDE AND BUNKER OILS		
Heavy, f.o.b. Tampico, Taxes to be added	1.20	-1.15
Mexican Grade C, Bunker oil F. O. B. Tampico Taxes paid	1.40	1.40
Mexican C, Bunker oil New Orleans	1.50	1.40

Lubricating Oils

SOUTH TEXAS

(Viscosity at 100°F; cold test 0)
(Tanker, F. O. B. Houston)

	Nov. 9	Nov. 2
100 Vis. No. 2 Unfiltered Pale	07	07
150 Vis. No. 2½ Unfiltered Pale	10	10
200 Vis. No. 3 Unfiltered Pale	11	11
300 Vis. No. 3 Unfiltered Pale	13½	13½
500 Vis No. 3½ Unfiltered Pale	15½	15½
200 Vis. No. 5½ Red Oil	10	10
300 Vis. No. 5½ Red Oil	12	12
500 Vis. No. 6 Red Oil	14	14
800 Vis. No. 6 Red Oil	20	20

Pennsylvania Market Moving Steady

The outlook for the Pennsylvania field should be classified as very favorable judging from conditions for the past few weeks. Most products have remained within a fraction of cents in price range in this period and according to the refiners there is no evidence at hand to indicate any slowing up of activities. Weather conditions have had a slight effect on the gasoline market last week but this appears to have passed over, and the demand has increased over the week end. Kerosene has been enjoying a steady market and moving strong at 6¾ cents. Some refiners are getting 7 cents but the majority are quoting the former price. Burning oils are beginning to take on added strength, which is seasonable at this time of the year. Wax continues scarce with quotations from 5¾ to 6 cents.

Gulf Coast Lubes Firmer

HOUSTON, Nov. 7.—Domestic demand for Gulf Coastal lubricants is increasing and prices, although unchanged, are firmer. Export demand has been upset by European receipts from Russia amounting to about 90,000 tons monthly, it is reported by reliable sources of information. Gulf Coastal manufacturers report strong domestic demand particularly for the 200, 300 and 500 viscosity grades.

Crude Shipments of Crown Central

HOUSTON, Nov. 7.—M. E. Ehlen, vice president of the Crown Central Petroleum Corp., announces the handling of the following quantities of crude oil over the company's Houston ship channel terminal in October:

For	Bbls.
Beacon Oil Co.	29,892,841
Big Lake Oil Co.	4,990,307
Total	34,883,148

British Importations

During the week ended, Oct. 12, there were 12,451,838 gallons of petroleum imported into the United Kingdom. Larger receipts were:

Consignee	Imperial Gallons	Product	Port of Origin
London—			
Anglo-Amer.	131,820	Gas Oil	Atreco
Cory Bros.	1,241,653	Kerosene	Constantza
Shell	2,488,163	Crude	Curacao
Bristol—			
Anglo-Amer.	1,047,034	Gasoline	B. Rouge
Hull—			
Shell	926,895	Gasoline	Abadan
Southampton—			
Brit-Mex	2,292,021	Crude	Aruba Isles
Shell	1,232,771	Benzine	Abadan
Swansea—			
Nat'l. Refg.	2,532,870	Crude	Abadan

Crude Oil Prices All Fields

ALL PRICES EFFECTIVE, *Nov. 9*

EASTERN FIELDS
Posted by Joseph Seep Purchasing Agency

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$3.15
Bradford District Oil in National Transit Lines (Bradford District)	3.15
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	3.05
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	3.05
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.00
Penna. Grade Oil in Buckeye Pipe Lines (Ohio)	2.80
Gaines, Tioga Co. (Pa.)	$2.70
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.95
Corning Grade in Buckeye Pipe Lines (Ohio)	1.80
*Somerset Medium in Cumberland Pipe Lines (Kentucky)	2.05
*Somerset Light in Cumberland Pipe Lines (Kentucky)	2.20
Ragland Grade in Cumberland Pipe Lines (Kentucky)	1.00

*Somerset oil run prior to Oct. 1, 1923, takes price of 6 cents lower than above quotations.

CENTRAL STATES FIELDS
Posted by Ohio Oil Co.

Wooster $2.00	Indiana $1.78	Plymouth $1.40
Lima 1.98	Princeton 1.87	*Canadian Petrolia 2.38
	Illinois 1.87	*Posted by Imperial Oil, Ltd.

OKLAHOMA, KANSAS And NORTH TEXAS FIELDS
(Prices of Prairie Oil & Gas Co.)
(Prairie's prices apply in Oklahoma, Kansas, North and Central Texas.)

*28-28.9	$1.15	34-34.9	$1.63	40-40.9	$2.11
29-29.9	1.23	35-35.9	1.71	41-41.9	2.19
30-30.9	1.31	36-36.9	1.79	42-42.9	2.27
31-31.9	1.39	37-37.9	1.87	43-43.9	2.35
32-32.9	1.47	38-38.9	1.95	44 and above	2.43
33-33.9	1.55	39-39.9	2.03		

*Effective Nov. 1, Prairie announced to its present customers that it would deduct 8c per barrel for every degree below 28 gravity on Mid-Continent and North Texas crude. It will pay $1.07 for 27-27.9, 99c for 26-26.9, etc. New quotations are not added to present schedule inasmuch as Prairie is not in the market for new connections on this low gravity crude.

Humble Oil & Refining Co. Prices
(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie and Moran crudes, all in Texas.)

28-28.9	$1.35	34-34.9	$1.71	40-40.9	$2.07
29-29.9	1.41	35-35.9	1.77	41-41.9	2.13
30-30.9	1.47	36-36.9	1.83	42-42.9	2.19
31-31.9	1.53	37-37.9	1.89	43-43.9	2.25
32-32.9	1.59	38-38.9	1.95	44 and over	2.31
33-33.9	1.65	39-39.9	2.01		

Magnolia Petroleum Co. Prices

*In Oklahoma and Kansas		**In North Texas	
Below 28	$1.00	Below 28	$1.00
28-30.9	1.31	28-30.9	1.35

*Remainder of Magnolia's gravity schedule in Oklahoma and Kansas begins with 31-31.9 and follows Prairie schedule.

**Remainder of Magnolia's gravity schedule in North Texas begins with 31-31.9 and follows Humble schedule

NORTH LOUISIANA—ARKANSAS FIELDS
***Prices of the Standard Oil Co. of Louisiana**

Caddo, below 32	$1.65	Haynesville, below 33	$1.55	Smackover, 24-24.9	$1.15
do 32-34.9	1.75	do 33 and above	1.65	do 25-25.9	1.20
do 35-37.9	1.85	El Dorado, below 33	1.55	do 26-26.9	1.25
do 38 and above	1.95	do 33 and above	1.65	do 27 and above	1.30
Homer, below 31	1.40	Bull Bayou, 32-34.9	1.45	De Soto	1.80
do 31-32.9	1.55	do 35-37.9	1.60	Crichton	1.60
do 33-34.9	1.65	do 38 and above	1.75	Bellevue	1.65
do 35 and above	1.75	Smackover, below 24	.85	Cotton Valley	1.10

*Same prices maintained by The Texas Co. and Gulf Production Co. The Texas Co. buys in Caddo, Bull Bayou, De Soto, Crichton and Smackover fields.

STEPHENS, ARKANSAS
Posted by Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

26 and above	$1.40	Below 26	$1.20

SMACKOVER, ARKANSAS
Prices of Louisiana Oil Refining Corp.

Below 24	$0.85	25-25.9	$1.25	27 and above	$1.35
24-24.9	1.15	26-26.9	1.30		

SMACKOVER, ARKANSAS
Prices of Atlantic Oil Producing Co. and Shreveport-Eldorado Pipe Line Co.

Below 24	$0.90	25-25.9	$1.25	27 and above	$1.35
24-24.9	1.15	26-26.9	1.30		

GULF COASTAL FIELDS
(Posted by Humble Oil & Refining Co., The Texas Co., Gulf Production Co., Sun Oil Co. and Sinclair Crude Oil Purchasing Co.)

Grades A	$1.50	Grades B	$1.25

Goose Creek, Hull, Orange and Pierce Junction are the only Gulf Coastal fields that have A and B grade classifications. All other fields are classified as A grades only.

ROCKY MOUNTAIN FIELDS
Prices of Ohio Oil Co. and Midwest Refining Co.

†Salt Creek 29-29.9	$1.23	36-36.9	$1.79	Rock Creek	$1.75
30-30.9	1.31	37 and above	1.87	†Osage	1.90
31-31.9	1.39	Elk Basin	1.90	†Cat Creek, Mont.	1.90
32-32.9	1.47	Grass Creek light	1.90	Sunburst, Mont.	1.55
33-33.9	1.55	Big Muddy	1.75	†Hogback, N. Mex.	1.95
34-34.9	1.63	Lance Creek	1.90	Artesia, N. Mex.	1.45
35-35.9	1.71				

†Posted by Midwest Refining Co. Midwest also buys Grass Creek light, and Elk Basin. The Texas Co. buys Salt Creek crude.

CALIFORNIA
Prices of Standard Oil Co. of California

Standard Oil Co. of California on Sept. 22 reduced California crude from 10 to 35 cents per barrel and posted 19 new price classifications in the various fields. Instead of paying the same price for the same gravity of oil in all fields regardless of the value of the oil, as it previously has done, the Standard put into effect a new schedule which provides a different schedule of prices for each field and takes into account the varying values of oils of the same gravity in the different fields.

On Oct. 27, it further reduced heavy oils in amounts ranging up to 15 cents. New base price for heavy oils in the San Joaquin Valley is 75 cents, in Southern California fields, 85 cents, and in the Rosecrans-Dominguez, Santa Maria and Ventura county fields, it is $1 per barrel for 14 to 14.9 gravity. Light oils remain unchanged.

The new complete schedule of prices in California can be obtained from the editorial department of National Petroleum News on application.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	Nov. 9	Nov. 2
Soda Ash light 58% bags cwt.	–$1.38	–$1.38
Silicate of Soda 60 deg. drums.....cwt.	– 1.70	– 1.70
Sal Soda wks.....cwt.	1.10– 1.25	1.10– 1.25
Caustic Soda 70% solid..cwt.	– 3.10	– 3.10
Chloride of Lime.....cwt. works.....	–2.00	– 2.00
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	–10.50	–10.00

Compounders' Supplies (Open Market)

Vegetable Oils—		
Linseed carloads spot.....lb.	12.9	12.9
October.....	12.9	12.9
Tanks, spot.....	12.1	12.1
Boiled carloads spot.....lb.	13	13
*Soya Bean spot, Bbls....lb.	13½	13½
Animal Oils—		
English Degras.....lb.	.05½	–.05½
Domestic Degras, bbls., carloads.....lb.	–.04½	–.04½
*Horse.....lb.	–.10	–.10
Oleic Acid—		
Dist. Bbls.....lb.	.11½–.12	.11½–.12
Saponified Bbls.....lb.	.11½–.12	.11½–.12
Castor Oil—		
No. 3 Carlots, Bbls.....	–.15	–.15
No. 1 Carlots, Bbls.....	–.15½	–.15½
Lard Oils—		
Prime Winter Strained. 1 to 1½ffa.40‡45c.t.lb.	.18½	.18½
Extra Winter Strained. 2 to 4½ffa.40/45c.t.lb.	.17¼	.17¼
Extra..... 4 to 5 ffa.40/45c.t.lb.	.14¼	.14¼
Extra No. 1 7 to 10 ffa.40/50c.t.lb.	.13¼	.13¼
No. 1.....15 to 18 ffa.40/45c.t.lb.	.13	.13
No. 2.....22 to 23 ffa.40/45c.t.lb.	.12¾	.12¾
Prime Edible Tallow under 1½ffa. 40/45c.t.N.Y.....lb.	–.11¼	–.11¼
Tallow acidless.....lb.	–.13½	–.13½
Lard Stearine.....lb.	–.20	–.20
Oleo Stearine.....lb.	–.14	–.14
Neatsfoot Oil—		
Pure.....bbls.-lb.	.15¼	.14¾
Extra.....do lb.	.13¾	.13¼
No. 1.....bbls.-lb.	.13¼	.13
Cold pressed.....lb.	.18¼	.17¾
Fish Oils—		
Menhaden Oil		
Light pressed.....gal.	.67–.70	70–.72
White.....gal.	.70–.72	73–.75
Yellow bleached.....gal.	.73–.75	75–.77
*Herring tank cars coast.....gal.	–.50	–.50
Whale, extra winter bleached.....gal.	–.82	–.82
Seal.....gal.		Nominal
Naval Stores—		
Turpentine, N. Y.....gal.	1.13	1.11
Turpentine†.....gal.	1.07	1.04½
Rosin, B. N. Y.....Bbl.	15.80	15.55
Rosin, F. N. Y.....Bbl.	15.80	15.55
Rosin, B†.....Bbl.	14.30	14.05
Rosin, F†.....Bbl.	14.30	14.05
Rosin Oil 1st run.....gal.	.85	.85
Rosin Oil 2nd run.....gal.	.88	.88
Pine Tar—		
Kiln Burnt.....Bbl.	15.00	15.00
Retort.....Bbl.	15.00	15.00
†Savannah, Ga. market.		
*Nominal.		
Alcohol—		
Formula 6		
Bbls.....gal.	–59½	59¼
Drums.....gal.	–52½	52½

Compounding Supplies Mostly Steady

By Special Correspondent

NEW YORK, Nov. 9.—Following is a review of the markets for supplies and oils used in refining and compounding:

Alcohol demand much better. Stocks moderate. Prices firmer. Production fair.

Bleaching Powder movement larger. Prices steady. More interest in forward deliveries. Export demand lighter.

Animal Oils steady. Demand lagging. Most buyers operating hand-to-mouth. Domestic degras steady. Neatsfoot oil waiting. Oleic acid quiet. Unchanged. Tallow oil quiet. Lard oil demand trifle better.

Fish Oils easier. Crude menhaden reduced to 51 cents, gallon, tanks factory. Light pressed in barrels, New York cut 3 cents now 67 to 70 cents. Buyers showing little interest. Yellow and bleached oils show similar losses. Whale oil remains quiet. Demand lighter.

Soda Ash buying slightly heavier. Good inquiry for 1926 delivery but price schedule unchanged. Export demand lagging. More interest in spot.

Sal Soda quiet. Buyers purchasing as needed. Prices unchanged. Stocks and production fair.

Naval Stores on upward trend. Rosins moving more freely with interest centered on medium and lower grades. Demand for turpentine better. Export buyers more active. Stocks small, owing to limited receipts in south. Tar and pitch demand also more spirited. Rosin oils moving in steady way.

Linseed Oil firmer, reflecting trend in flaxseed. Stocks moderate. More interest in futures. Spot stocks limited. Good contract movement prevents accumulations. Boiled oil demand better. Linoleum makers chief buyers.

Sulfuric Acid firm in sympathy with raw material. Prices unchanged.

Benzol Demand Is Still Ahead of Supply

By Special Correspondent

NEW YORK, Nov. 9.—Production of benzol is slowly gaining, but as yet has not increased enough to affect prices. Motor benzol consumption is expected to show a slight decline from now on owing to the less favorable weather. Demand, however, is still good, and spot tanks at the ovens are not available below 23 cents a gallon.

There is practically no resale motor benzol available, and the expected slump has failed to materialize. Pure and 90 per cent benzol are still in good demand and export inquiries are more numerous. Leading marketers report heavy deliveries against standing contracts, which prevent stocks from piling up.

Traveling Ad Man for N. P. M. A.

CHICAGO, Nov. 6.—National Petroleum Marketers Association recently has taken on a new man in the department of out-door advertising. His duties will be unique, in that he will act as a sort of traveling advisor and designer of out-door advertising. The new man's name is Herbert S. Davies, and he will tour the country where oil men are using the N. P. M. A. advertising plan, pushing Red Hat gasoline and Emblem motor oils, and will help them work out exhibits at bulk and service stations, wayside posters, and oil displays.

New Oil Marketing Firm Formed in Chicago

Staff Special

CHICAGO, Nov. 6.—Organization of a new carload marketing firm has been announced by Harry McCormick and R. B. Foster, to be known as the McCormick-Foster Co. Offices will be in room 1914 Tribune Tower, Chicago. To launch this business, Mr. McCormick relinquishes the position of sales manager of the H. H. Cross Co., Chicago, department of gasoline. He has served in that capacity three years of the 15 he has spent in the oil business.

Mr. Foster has spent 10 years in the oil business, for the last few years as president of the Central Illinois Oil Co. which he organized. For four years previous to that he was manager of a number of stations for the Shaffer Oil & Refining Co. in Illinois. The Central Illinois Oil Co. was organized to take these stations over under lease. He has sold his interest in that organization to parties in Lincoln, Ill.

N. Y. Domestic Market

The following light oil, gas and fuel oil prices are F. O. B. New York refineries, being products made from Domestic (including California) and Mexican Crudes.

	Nov. 9	Nov. 2
U. S. Motor Gasoline, Tank Cars Delivered.....	–12	12¼–12½
U. S. Motor Gasoline, Tank Cars Bayonne.....	10¾–11	11¾–11½
Kerosene, 43-150 W. W. Tank, Cars Del'd.....	–08¾	–.07¾
Grade C Bunker f.o.b.N.Y....	1.65	1.65
Diesel Oil f.o.b. Refinery.....	2.10	2.10
Gas Oil,36-40, Bulk Refinery..	–05	–05
Gas Oil, 28-34 Bulk, Refinery	–04¾	–04¾
Furnace Oil, 38-42 Ref.....05¾–06		05¾–06
*nominal		

OIL STOCKS AND FINANCES

American Republics Net Doubled in Year

NEW YORK, Nov. 6.—American Republics Co. reports net profits of $926,126 after all charges and federal income taxes for the third quarter of 1925. This is equivalent to $3.75 a share on the 200,000 shares of no par common stock. In the third quarter of 1924 net profits were equivalent to $1.51 a share.

The corporation is a holding organization, its subsidiaries being the American Petroleum Co., Federal Petroleum Corp., Papoose Oil Co., Republic Production Co., Petroleum Iron Works Cos. of Ohio and Pennsylvania, Pennsylvania Car Co., Pennsylvania Tank Line, and Petroleum Supply Co.

The corporation in the nine months ended Sept. 30, 1925, netted $9.26 a share as against $7.46 a share in the corresponding time of 1924. The corporation is not at present paying a dividend.

Consolidated income accounts for the two third quarters compare:

	1925	1924
Sales	$7,723,842	$6,037,771
Cost of sales	6,015,128	4,838,739
Expenses	522,480	547,015
Net income	$1,186,234	$ 652,017
Surplus after income tax	$ 926,126	$ 478,969

Consolidated income accounts for the two nine-month periods compare:

	1925	1924
Sales	$23,310,827	$19,018,958
Cost of sales	18,725,537	14,751,529
Expenses	1,636,056	1,626,918
Net income	$ 2,949,234	$ 2,640,511
Surplus after income tax	$ 2,378,805	$ 2,018,449

White Eagle More Than Doubles Net Income

CLEVELAND, Nov. 7.—While Eagle Oil & Refining Co. reports for the third quarter of 1925 net income before depreciation, depletion and federal taxes more than double net income for the third quarter of 1924 before the same reserves. Gross sales were increased almost 20 per cent in 1925 over 1924. The White Eagle owns and operates more than 600 distributing stations through which it distributes approximately 80 per cent of its refineries' output, President L. L. Marcell reports.

Income statements for the third quarters of 1925 and 1924 compare:

	1925	1924
Sales	$5,393,377	$4,508,907
Cost of Sales	3,990,201	3,464,831
Gross profit	$1,403,176	$1,044,076
Expenses	712,942	711,626
Operating profit	$ 690,234	$ 332,450
Other income	84,184	76,280
Total income	$ 774,418	$ 408,730
Miscel. charges	101,289	103,912
*Net income	$ 673,129	$ 304,818
*Net 1st 6 months	1,814,947	1,618,968
*Net 1st 9 months	$2,488,079	$1,923,786

*Before depreciation, depletion, federal taxes.

Barnsdall Retains All of Oil Properties

TULSA, Nov. 9.—Sale of the capital stock interest of the Barnsdall Corp. in the Potter Gas Co. and Dempseytown Gas Co. did not involve the Potter Oil Co. of West Virginia or the Barnsdall Oil Co. of California, former subsidiaries of the Potter Gas Co. engaged in oil production, an official of the Barnsdall Corp. said here today.

No announcement was made concerning the oil properties at the time the Barnsdall Corp. announced sale of the two gas companies to Sevens & Wood, Inc., investment bankers of New York, for the account of purchasers yet unrevealed. The two oil companies were divorced from the Potter Gas Co. six months or more ago.

The price paid for the gas properties was $2,600,000 which money will be used to retire most of the remaining outstanding 8 per cent bonds of the holding corporation.

Independent Nets $839,499

CLEVELAND, Nov. 7. — Independent Oil & Gas Co. reports net earnings of $839,499 after expenses, taxes and other charges but before depreciation and depletion in the third quarter of 1925 as compared with $1,372,994 in the second quarter and $308,413 in the third quarter of 1924. Income in the first nine months of 1925 totaled $3,222,191 as against $1,399,738 in the first three quarters of 1924.

Cleveland Stock Market

	Par	Nov. 6 Bid	Asked	Last Sale
Canfield Oil Co.	$100	108½	.....	115
do pfd.	100	98	100	95
Fred G Clark Co.	10	2⅝	3	2¾
National Refin. Co.	25	43¼	43½	43¼
do pfd.	100	.....	135	128
Paragon Refin. Co.	25	8	8¼	8¼
do pfd.	100	63	65	61

x-Ex dividend

Independent Oil & Gas Boosts Earnings

NEW YORK, Nov. 7.—Independent Oil & Gas Co.'s gross earnings in the quarter ended with September were more than three times gross for the third quarter of 1924, and net profits after interest, depreciation and depletion were more than six times as great, being $1.01 a share on 500,000 no par shares as compared with 17 cents a share on 450,000 outstanding in 1924.

In the first nine months gross was more than double and net income after setting aside $150,000 for income taxes was more than triple the net income for the corresponding nine months of 1924.

Income accounts for the two third quarters compare:

	1925	1924
Gross earnings	$1,594,286	$ 505,709
Expenses, ord. tax dry holes, etc.	751,076	195,349
Net	$ 843,210	$ 310,360
Interest, disc.	3,711	1,947
Total income	$ 839,499	$ 308,413
Deprec., depletion	333,152	228,494
Net income	$ 506,347	$ 79,919

Income accounts for the two nine-month periods compare:

	1925	1924
Gross earnings	$4,739,303	$2,172,754
Expenses, ord. tax, dry holes, etc.	1,500,269	774,262
Net	$3,239,034	$1,398,492
Interest, disc.	16,843	1,246
Net income	$3,222,191	$1,399,738
Deprec., depletion	908,278	720,113
Federal tax	150,000	.....
Net income	$2,163,913	$ 679,625

Oil Dividends

	Amount	Stock of Record Payable	Record
Buckeye P. L. q.	$1	Dec. 15	Nov. 20
Continental Oil q.	25c	Dec. 15	Nov. 14
Mid-Continent Pet. pfd. q.	$1.75	Dec. 1	Nov. 14
Pennok Oil q.	50c	Dec. 21	Dec. 10
Southern P. L. q.	$1	Dec. 1	Nov. 16
S. O. Indiana q.	62½c	Dec. 15	Nov. 16
S. O. Nebraska s. a.	$5	Dec. 21	Nov. 20
do extra	$10	Dec. 21	Nov. 20
Union Tank Car q.	$1.25	Dec. 1	Nov. 10
do pfd.	$1.75	Dec. 1	Nov. 10
Vacuum Oil q.	50c	Dec. 19	Nov. 30
do extra	50c	Dec. 19	Nov. 30
do special	$1	Dec. 19	Nov. 30
Imperial Oil q.	25c	Dec. 1	Nov. 14
S. O. New York q.	35c	Dec. 15	Nov. 20

Vacuum Oil Co.—Extra dividend of 50 cents and special dividend of $1 declared payable Dec. 19 to stock of Nov. 30 record. The special dividend will bring the company's payments this year up to $5 per $25 share as against $3.75 in 1924 and $2.50 in 1923.

Transactions In Oil Shares on New York Stock Exchange

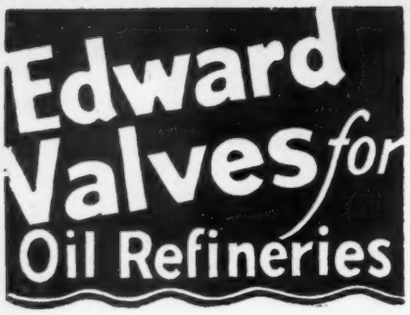
1924 High	1924 Low	1925 High	1925 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Nov. 7 Sales	First	High	Low	Last	Chg'e
48	25	76	48	(sh)	200,000	N.P.	American Republics	.....	.....	.....	.....	.....	.....	.....	.....
345/8	271/2	411/2	32	$	56,000,000	$25	Associated Oil	50cQ	Oct. 26, 25	5,000	361/2	373/4	361/4	365/8	+ 1/4
1403/8	781/2	1171/2	951/2		50,000,000	100	Atlantic Refining	.....	June 16, 24	3,700	103	1033/4	1021/2	103	0
118	108	1173/4	1131/2		20,000,000	100	do pfd	$1 3/4Q	Nov. 2, 25	.....	.....	.....	.....	.....	.....
231/2	14	30	183/4		18,428,350	25	Barnsdall Corp. A	.....	Apr. 30, 21	8,000	25	253/8	24	24	— 3/4
173/4	10	237/8	16		3,713,275	25	do B	.....	Apr. 30, 21	2,900	23	23	23	23	+ 1/4
4 3/4	1	23/4	1/2	(sh)	150,000	N.P.	Caddo Central O. & R	.....	.....	.....	.....	.....	.....	.....	.....
291/4	191/2	327/8	253/4	$	30,549,925	$25	California Petroleum	50cQ	Sept. 1, 25	32,700	283/4	31	283/4	31	23/4
653/8	313/8	623/4	421/2		19,832,300	100	General Asphalt Co	.....	.....	14,700	581/2	603/4	58	583/8	0
100	711/2	101	861/4		7,416,000	100	do pfd	$1 1/4Q	Sept. 1, 25	600	1003/8	1003/8	100	100	— 3/4
45	383/8	59	42		29,194,650	25	General Petroleum	50cQ	Sept. 15, 25	18,700	47 1/4	483/4	47 1/4	483/4	+ 3/8
823/4	61	85	69		25,000,000	100	Houston Oil Co	.....	.....	4,300	703/4	717/8	693/4	693/4	— 1/2
163/4	53/4	401/2	131/2	(sh)	500,000	N.P.	Independent Oil & Gas	25cQ	Oct. 5, 25	50,100	313/4	33	313/8	315/8	+ 1/4
73/8	33/4	103/4	51/2	$	3,256,590	$10	Indian Refining Co	.....	Dec. 15, 20	15,900	93/8	97/8	9	93/8	+ 3/8
75	60	95	77		2,296,400	100	do pfd	.....	Dec. 15, 21	100	91	91	91	91	+1
1	1/4	1 1/2	1/4		1,678,760	10	Kansas & Gulf Corp	.....	.....	200	1/2	1/2	1/2	1/2	+ 1/8
.....	.....	233/4	133/8	(sh)	1,078,166	N.P.	Louisiana Oil Refining	.....	.....	9,000	17	173/4	163/8	163/8	+ 3/8
373/8	243/8	353/8	203/8	(sh)	330,000	N.P.	Maracaibo Oil	.....	.....	2,200	233/4	243/8	23	233/8	— 3/8
42	29	563/8	323/8	(sh)	1,885,343	N.P.	Marland Oil Co	75cQ	Sept. 30, 25	192,600	543/4	57	543/4	56	+ 1/8
190	190	250	225	$	45,942,800	$100	Mexican Petroleum Co	$3Q	Oct. 20, 25	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....		12,000,000	$100	do pfd	$2Q	Oct. 20, 25	.....	.....	.....	.....	.....	.....
253/4	141/8	223/4	103/4	(sh)	945,989	N.P.	Mexican Seaboard Oil	.....	Nov. 15.24	12,200	113/8	123/4	113/8	12	+ 3/8
403/4	223/8	36	26	(sh)	1,357,800	N.P.	Mid-Continent Petroleum (Cosden)	.....	Aug. 1, 23	62,400	34 1/2	353/8	343/8	345/8	+ 1/8
95	80	94 1/2	83	$	6,718,000	$100	do pfd	$1 3/4Q	Sept. 1, 25	100	94	94	94	94	+1
67/8	1	3 1/4	1/4	$	26,013,700	10	Middle States Oil Corp	.....	July 1, 23	6,000	1 1/8	1 1/4	1 1/8	1 1/4	1/4
583/4	45	651/4	513/8	(sh)	3,500,000	N.P.	Pacific Oil Co	$1.50S.A.	July 20, 25	44,600	543/8	573/8	543/4	553/8	+ 3/4
65	443/4	833/8	593/8	$	48,307,400	$50	Pan American P. & T	$1.50Q	Oct. 20, 25	9,800	72 1/2	743/8	71 1/2	72 1/4	0
643/8	413/4	843/8	603/8		90,476,200	50	do Class B	$1.50Q	Oct. 20, 25	137,200	73	753/8	73	73	0
.....	.....	.....	.....	(sh)	400,000	N.P.	Pan American Western	.....	.....	33,500	423/4	447/8	413/8	423/8	+ 3/8
4 3/8	1 3/8	5 3/8	2 1/4	(sh)	198,770	N.P.	Panhandle P. & R	.....	.....	1,400	3 1/4	3 1/4	2 3/4	3	— 1/4
42 1/2	29	60 1/2	37	$	2,935,200	$100	do pfd	.....	July 2, 23	.....	.....	.....	.....	.....	.....
423/4	283/4	473/8	363/4	(sh)	1,925,152	N.P.	Phillips Petroleum	50cQ	Oct 1, 25	64,000	433/4	447/8	433/4	433/4	+ 3/8
4 1/2	1 1/2	3 3/8	1 1/2	$	29,622,925	$25	Pierce Oil Corp	.....	.....	5,200	1 5/8	1 3/4	1 1/2	1 1/2	— 1/8
36	20	40	22		15,000,000	100	do pfd	.....	Feb. 1, 22	800	25	25	22	233/4	—3 1/4
5 3/4	4 3/8	8 1/4	4 3/4	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	7,100	5	5 1/4	4 3/4	5	0
483/4	223/4	325/8	13 1/2	$	11,467,850	50	Producers & Refiners	.....	Sept. 15, 23	200	16 1/2	17 1/2	16 1/2	17	+1
47 1/2	42	475/8	27		2,845,350	50	do pfd	.....	May 1, 25	200	31	31	31	31	0
301/4	20	333/4	253/8		75,959,250	25	Pure Oil Co	37 1/2cQ	Sept. 1, 25	7,600	27 1/2	273/8	27	27 1/8	— 1/8
1053/4	92	1083/4	103		13,000,000	100	do 8% pfd	$2Q	Oct. 1, 25	200	107	107	1063/8	1063/8	— 1/8
593/4	403/4	573/4	483/4	(sh)	820,436	13.40	Royal Dutch, N. Y. shares	$3.18 1/2	Aug. 12, 24	11,600	513/4	53	51 1/8	523/8	+1 3/8
42	33	453/4	393/4	(sh)	105,575	£2	Shell Transport & T	$1.21	July 25, 25	1,000	43 1/8	44	43 1/8	433/4	+1 1/2
223/4	153/4	283/8	213/8	(sh)	10,000,000	N.P.	Shell Union Oil Corp	35cQ	Sept. 30, 25	27,600	24 1/8	247/8	24	243/8	+ 3/8
993/8	91 1/2	1063/4	99 1/2	$	20,000,000	$100	do pfd	$1 1/2Q	Nov. 16, 25	1,100	105	1063/4	105	106	+1
24	103/8	263/4	183/8		7,207,090	10	Simms Petroleum Co	50S.A.	July 1, 25	9,000	21	23	21	22 1/2	0
273/8	15	243/8	17	(sh)	4,484,450	N.P.	Sinclair Consolidated	.....	May 31, 24	37,100	195/8	20 1/2	193/8	193/4	+ 3/8
90	75	943/8	783/4	$	18,190,200	$100	do pfd	$2Q	Nov. 16, 25	100	89	89	89	89	—2 1/2
29	173/8	303/8	213/4		20,966,500	25	Skelly Oil Co	.....	.....	25,100	27	29	27	283/8	+1 1/8
683/8	553/8	673/4	51 1/2		236,869,225	25	S. O. California	50cQ	Sept. 15, 25	8,500	543/8	56	543/8	553/8	+ 1/2
423/4	33	473/8	383/8		511,631,025	25	S. O. New Jersey	25cQ	Sept. 15, 25	26,100	41	413/4	403/4	41 1/2	+ 3/4
1193/8	1153/4	119	1163/4		199,972,900	100	do pfd	$1 3/4Q	Sept. 15, 25	1,800	117 1/4	1173/4	117 1/4	1173/4	+ 1/2
83/8	23/8	63/8	23/4	(sh)	1,121,368	N.P.	Superior Oil Corp	.....	Dec. 20,20	2,300	3	3	2 7/8	3	+ 1/8
453/8	373/4	53	423/4	$	164,450,000	$25	The Texas Co	75cQ	Sept. 30, 25	44,000	51 3/4	523/4	505/8	51	0
15 1/4	8	233/8	10 1/8		8,380,340	10	Texas Pacific Coal & Oil	.....	June 30, 23	10,800	133/4	14 1/2	13 3/4	13 1/2	0
.....	.....	363/4	303/4	(sh)	2,017,719	N.P.	Tide Water Oil Co	25cQ	Sept. 30, 25	7,200	32	333/8	32	33	+ 1/8
.....	.....	101	993/4	$	25,059,000	$100	do 5% pfd	$1.25Q	Nov. 16, 25	1,300	101	101	993/4	100	— 1/8
63/4	33/4	57/8	3 1/2	(sh)	3,742,029	N.P.	Transcontinental Oil Co	.....	.....	9,700	3 3/4	3 7/8	3 5/8	3 3/4	+ 1/8
39	35	433/8	33	$	40,480,800	$25	Union Oil of California	45cQ	Nov. 10, 25	8,600	355/8	365/8	35	35 1/4	— 3/4
1323/8	94	134	118		18,262,300	100	Union Tank Car Co	$1 1/4Q	Sept. 1, 25	1,900	124	132	124	132	+6
1163/4	1063/4	1173/8	113 1/4		12,000,000	100	do pfd	$1 3/4Q	Sept. 1, 25	300	1143/8	115	1143/8	115	0
293/8	233/8	313/4	25 1/2	(sh)	490,000	N.P.	White Eagle Oil & Ref	50cQ	Oct 20, 25	1,600	263/4	273/8	263/8	263/8	— 1/4

*New High †New Low xEx-dividend Total Sales 989,900

Standard Oil Stock Traded In New York Curb Market

1924 High	1924 Low	1925 High	1925 Low		Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Nov. 6 Sales	First	High	Low	Last	Chg'e
183/4	143/4	263/8	18	£	3,000,000	£1	Anglo American	60 3/4cS.A.	May25, 25	6,500	23 1/2	237/8	23 1/4	237/8	+ 3/8
4 7/8	2	4	2	(sh)	500,000	N.P.	Atlantic Lobos	.....	.....	900	2 1/4	2 3/8	2 1/8	2 3/8	+ 3/8
16	5	123/8	3	$	10,000,000	$10	do pfd	.....	.....	1,000	3 3/4	4 1/2	3 3/4	4 1/2	0
265	155	240 1/2	205		1,000,000	$100	Borne-Scrymser	‡84S.A.	Oct. 15, 25	20	225	230	225	230	—5
85 1/2	51	72	54		10,000,000	50	Buckeye Pipe Line	$1Q	Sept. 15, 25	420	55 3/4	563/4	55 1/2	56	+ 1/2
52 1/2	473/8	70	48 1/2		3,000,000	25	Chesebrough Mfg. Co	62 1/2cQ	Sept. 30, 25	1,120	71	74	693/8	70	+ 1/2
115	112	115	110		1,000,000	100	do pfd	$1 3/4Q	Sept. 30, 25	.....	.....	.....	.....	.....	.....
.....	.....	31 1/2	21 7/8		34,914,280	$10	Continental Oil (Maine)	25cQ	Sept. 15 25	31,900	23 3/8	24 1/2	23 1/2	24	+ 1/4
20	11 3/4	17 1/2	10 3/8		1,500,000	25	Crescent Pipe Line	.....	Sept.1', 23	300	16 1/4	16 1/2	16 1/4	16 1/4	— 3/8
149	1103/4	156	132		3,000,000	100	Cumberland Pipe Line	$3Q	Sept. 15, 25	130	142 1/2	144	142	144	+2
105	74	96	66		5,000,000	100	Eureka Pipe Line	$1Q	Nov. 2, 25	30	67	67 1/2	†66	67 1/2	— 1/4
693/4	52	65	34		16,000,000	100	Galena Signal Oil	.....	June 30, 25	50	39	39	39	39	— 1/8
113	100 1/2	105	100		4,000,000	100	do new pfd	$2Q	Sept. 30, 25	20	101	101	101	101	0
116	110	114	103		2,000,000	100	do old pfd	$2Q	Sept. 30, 25	40	105	107	105	107	+2
483/4	343/8	733/8	423/8		43,750,000	25	Humble Oil & Ref	30cQ	Oct. 1, 25	31,000	73	74	71 1/2	723/8	0
161	120	1543/8	127		20,000,000	100	Illinois Pipe Line	$6S.A.	June 30, 25	860	140	149	139	149	+9 1/2
.....	.....	343/4	273/4	(sh)	6,491,852	N.P.	Imperial New w.i	25cQ	Sept. 1, 25	4,700	323/8	327/8	323/8	323/4	+ 1/4
100	66	84	60	$	5,000,000	50	Indiana Pipe Line	$1Q	Nov. 14, 25	600	63	63	†60	61 1/2	—1 1/2
243/4	163/4	283/4	223/4	(sh)	7,118,138	N.P.	International Petroleum	25c	Sept. 30, 25	42,300	27 1/2	28	273/8	273/8	+ 3/8
162	122	175	130 1/2	$	188,247,100	100	Magnolia Petroleum	1%stk.	Oct. 5, 25	4,310	171 1/2	175	169 1/4	175	+5
253/8	203/8	25 1/2	19 1/2		6,362,500	12 1/2	National Transit	25cQ	Sept. 15, 25	1,700	20 1/8	203/4	20 1/8	20 1/8	— 3/8
97	54 1/2	79	50		5,000,000	100	New York Transit	75cQ	Oct. 15, 25	40	54	54	54	54	+1
107 1/2	72	88	78		4,000,000	100	Northern Pipe Line	$3S.A.	July 1, 25	110	81	81	80 1/2	80 1/2	+ 1/4
79 1/4	55	75	60 1/4		60,000,000	25	Ohio Oil Co	50cQ	Sept. 30, 25	2,400	63 3/4	65 1/2	63 1/2	65 1/2	+1 3/4
43	27	44 1/2	20		10,000,000	25	Penn. Mex. Fuel	50c	May 21, 25	100	22	22	22	22	0
543/4	493/4	65 1/2	453/8		60,000,000	25	Prairie O. & G	.....	July 31, 25	23,200	48 5/8	513/8	48 1/2	513/8	+2 5/8
111	100	127 1/2	106		81,000,000	100	Prairie Pipe Line	$2Q	Oct. 31, 25	2,060	123	124 1/2	123	124	+1 1/2
230	175	259	200		4,000,000	100	Solar Refining Co	$5S.A.	June 20, 25	180	222	228	221	228	+7
100	80 1/2	103	29		10,000,000	100	Southern Pipe Line Co	$1Q	Sept. 1, 25	190	71	71 1/2	67 1/2	68	—7
171	117	197	139		20,000,000	100	South Penn Oil Co	.....	Sept. 30, 22	320	163	164 1/2	162	164	+2 1/4
89	68	84	53		3,500,000	100	Southwest Pa. Pipe Lines	$1Q	Oct. 1, 25	70	55	55	†53	53	0
683/4	54 3/4	70	59 1/2		223,756,258	25	S. O. Indiana	62 1/2cQ	Sept. 15, 25	32,400	63 7/8	643/4	63 3/8	643/8	+ 1/4
50 1/4	32 1/2	46	30 3/8		8,000,000	25	S. O. Kansas	.....	June 16, 24	3,200	31	32 1/8	30 1/2	32	+ 1/8
121 1/4	101	137	114 3/4		16,864,434	25	S. O. Kentucky	$1Q	Sept. 30, 25	3,100	133 1/4	135	132 1/2	134 3/8	+ 1/8
262	198	270	231		3,000,000	100	S. O. Nebraska	$5S.A.	June 20, 25	210	258	263	258	259 1/2	+8 1/2
48	37 3/4	483/8	40		227,535,300	25	S. O. New York	35cQ	Sept. 15, 25	11,400	44 1/4	45	44 1/4	44 7/8	+ 1/2
377 1/2	275	369	338		14,000,000	100	S. O. Ohio	$2 1/2Q	Oct. 1, 25	90	365	367	362	362	0
336	115	123	116		7,000,000	100	do pfd	$1 3/4Q	Sept. 1, 25	10	117	117	117	117	0
81	20	27	12 1/2		1,722,931	25	Swan-Finch Oil Corp	.....	Nov. 1, 19	150	18	19	18	19	+ 1/2
83 1/2	56 1/2	105 1/2	80 3/8		61,919,950	25	Vacuum Oil Co	‡50cQ	Sept. 19, 25	46,500	102	*105 1/2	100 1/2	103 1/2	+2 1/8
30	25	35	30		100,000	10	Washington Oil Co	.....	Jan. 31, 22	.....	.....	.....	.....	.....	.....

Borne Scrymser $2 extra April 15 $4 extra Oct. 15 ‡Vacuum 50c extra Mar. 20, June 20, Sept. 19



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New York Bonds

Week Ended Nov. 7, 1925

	High	Low	Last	Ch'ge
Amer. Rep. Cor. deb 6s.	97	97	97	0
Associated Oil gold 6s.	102¼	102¼	102¼	+ ¼
Atlantic Refg. deb 5s...	99⅞	99⅞	99⅞	+ ⅛
Barnsdall Corp 8s.....	105⅛	105	105⅛	+ ⅛
Calif. Petrol sf 6½s....	104¼	103⅜	104	0
Empire Gas & F 7½s..	104	103	103¾	0
Humble Oil & R. 5½s..	101⅜	101¼	101½	— ⅛
Mid-Cont Pet 6½s....	101⅜	100¾	101	— ⅛
Pan-Amer P & T 7s...	106½	105¾	105¾	— ⅛
Pan-Amer P & T 6s...	110	108¼	108½	— ½
Pierce Oil deb 8s.....	.....	.....	.....	.....
Prod. & Refnrs. 8s....	110	109¾	110	0
Sinclair Con Oil col 7s.	92½	92	92⅜	+ ⅛
Sinclair Con Oil con 6½s.....	87¼	86½	87	0
Sinclair Con Oil 6s....	106⅞	105¾	105¾	— ¼
Sinclair Crude Oil 6s..	100½	100⅜	100½	0
Sinclair Pipe Line sf 5s.	85¼	84½	85¼	+ ⅜
Skelly Oil 6½s.....	116¾	114½	116¼	+1¼
Superior Oil 7s.....	.....	.....	.....	.....
Union Oil of Calif 6s-A.	103¾	102¾	103¼	+ ¼
Union Oil of Calif 5s-B.	100⅜	100½	100½	— ¼
Union Oil of Calif 5s-C.	94¾	94½	94¾	— ⅛

New York Curb Bonds

Week Ended Nov. 7, 1925

	High	Low	Last	Ch'ge
Cities Serv. 6s.....	90⅝	90½	90⅝	+ ⅛
Cities Serv. 7s B.....	176	176	176	+ ¾
Cities Serv. 7s C.....	125½	125½	125½	+ ¼
Cities Serv. 7s D.....	101¾	101½	101⅜	+ ⅛
Cities Serv. 8s E.....	111	111	111	—1½
Galena S. O. 7s.....	104¾	104¾	104¾	0
General Pet 6s.....	101⅜	101½	101⅜	0
General Pet 5s w.i.....	94⅜	94¾	94⅜	+ ⅛
Gulf Oil 5s.....	100	99⅝	99¾	+ ⅛
Gulf Oil 5½s '26.....	.....	.....	.....	.....
Gulf Oil 5½s '27.....	101½	101	101½	0
Gulf Oil 5½s '28.....	102	101⅜	102	+ ¾
Pennok Oil 6s.....	100½	100½	100½	0
Phillips Pet 7½ w.w...	104¾	104	104	+ ½
Pure Oil 6½s.....	102½	102	102⅛	— ⅛
S O N Y 6½s.....	107	107	107	0
Sun Oil 5½s.....	97¾	97½	97¾	+ ¼
Tidal Osage 7s.....	103½	103½	103½	0
Trans Cont Oil 7s.....	95⅝	95½	95½	— ¼
Union Oil Cal 5s.....	.....	.....	.....	.....
Unit Oil Prod 8s.....	37	37	37	+2
Vacuum Oil 7s.....	105	104¾	105	+ ⅛
.....				

New York Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions week ended Nov. 6 Sales	First	High	Low	Last	Ch'ge
.....	.....	11⅛	2⅛	....	Amer. Maracaibo..	10,500	6¾	8⅛	6¼	8⅛	+1⅜
7	4	8¾	5	$10	Arkansas Nat. Gas.	100	6⅛	6⅛	6⅛	6⅛	0
36¾	32	45¾	38	25	British-American...	.....	.....	.....	.....	.....	.....
6¾	2¾	7⅜	2¾	25c	Carib. Syndicate...	22,600	6	7	6	6¾	+ ¾
.....	.....	45	35	$20	Cities Service	11,300	38¾	39⅛	38¾	39	— ⅛
82¾	67¾	84¼	80¼	100	do pfd.....	900	83⅜	84	83⅜	84	+ ¼
7¾	6⅛	8	7¾	10	do pfd. B.....	1,000	7½	7¾	7½	7¾	0
19	15¾	21⅜	17⅞	10	do bankers' sh...	200	19¼	19¼	19¼	19¼	+ ¼
1⅜	.25	2⅝	.60	N.P.	Colombia Syndicate	50,500	1¼	1⅜	1¼	1⅜	+ ¼
10¾	2¾	14⅜	8¼	N.P.	Creole Syndicate...	9,200	10⅞	11¼	10½	11¼	+ ½
.....	.....	12¼	6½	N.P.	Crown Central	2,600	7⅜	7¾	6½	6½	— ⅜
8	1⅜	7	3	N.P.	Derby Oil & Ref...	200	3¼	3¼	3¼	3¼	— ⅜
34¼	17½	27	17	N.P.	do pfd.....	.....	.....	.....	.....	.....	.....
.....	.....	3⅞	1⅜	N.P.	Gibson Oil.....	39,300	3⅜	4⅛	3¼	3½	0
5¾	1¾	3¾	1½	N.P.	Gilliland v.t.c....	.....	.....	.....	.....	.....	.....
67⅜	56	81½	63½	$25	Gulf Oil Corp....	12,200	78⅛	80⅜	78⅛	79⅛	— ⅜
7	1⅜	5⅜	2¼	N.P.	Kirby Petroleum...	4,000	3⅞	4¼	3½	3½	— ⅛
6¾	2⅜	7¾	4⅜	N.P.	Lago Petroleum ...	34,400	6¼	7¾	6¼	7¼	+1
.....	.....	25	18	N.P.	Lion Oil Refining..	8,400	24¾	25	24½	24¾	+ ⅛
4⅞	4	4¼	1¾	N.P.	Marland of Mexico.	.....	.....	.....	.....	.....	.....
1¾	.50	5¾	.50	$10	Mexican-Panuco...	38,900	5⅜	5¾	5	5	0
1¾	.97	2	1	1	Mountain & Gulf..	2,500	1⅜	1⅜	1½	1⅜	+ ⅛
20¾	16	24¾	18¾	10	Mountain Prod....	47,500	23	24¾	23	24½	+1½
6¾	3½	6½	3⅜	5	New Bradford Oil..	18,000	5¾	6⅛	5½	5⅞	0
44	17	87⅛	5	10	New England Fuel.	100	6	6	6	6	— ¾
.....	.....	193⅛	6¾	1	New Mex. & Ariz...	18,700	17¼	18	16¾	16¾	0
14	8⅛	12½	8¾	25	New York Oil.....	1,100	10⅜	10⅜	10	10⅜	0
.....	.....	37	23¾	N.P.	Pan-Amer. Western.	.....	.....	.....	.....	.....	.....
6	.70	1¾	.90	N.P.	Peer Oil Corp.....	3,200	1¾	1¾	1½	1⅝	— ⅛
18¾	12¼	28¼	16	$10	Pennok Oil.....	700	25⅜	25⅜	25⅛	25½	— ⅛
57¾	5¾	44½	16	25	Red Bank Oil.....	400	23	24¾	23	24½	— ¾
.....	.....	83½	9	N.P.	Reiter-Foster.....	1,800	18⅛	18⅜	17⅞	18⅜	+ ¼
5½	3	9½	3½	N.P.	Ryan Consolidated.	1,700	4½	5¼	4½	4½	— ¾
10¾	6	8¾	6⅜	$10	Salt Creek Cons....	11,400	7⅜	8¾	7½	8⅜	+1⅛
27½	19⅜	30½	24	10	Salt Creek Prod ...	36,600	28	30½	28	30	+2
3¾	1½	3¾	1¼	5	Savoy Oil.....	300	1¼	1¼	1¼	1¼	0
.....	.....	40½	33¾	N.P.	Sun Oil.....	6,300	39⅜	41	38	39¾	+ ¾
16¾	6¾	13¾	9	10	Tidal Osage.....	800	11¾	11⅝	11	11½	+1½
4⅜	2⅜	4⅞	1¾	5	Venezuelan Pet....	4,700	3¼	3½	3	3⅛	— ⅜
.....	.....	31¾	22⅜	N.P.	Wilcox O. & G. new	1,700	27¼	27⅜	27¼	27¼	— ¼
13⅞	4¾	7	3⅞	N.P.	Woodley Petroleum	300	5	5⅜	5	5⅜	+ ⅜

Pittsburgh Stock Exchange

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Nov. 6 Sales	First	High	Low	Last	Ch'ge
7	4	8⅛	5¼	$10	Arkansas Nat. Gas.	1,725	6¼	6¼	6⅛	6⅛	0
40¼	35⅜	73¼	69¼	N.P.	Columbia Gas.....	.....	.....	.....	.....	.....	.....
.....	.....	18	14½	$10	Devonian Oil.....	275	17½	17½	17	17	—1
.....	.....	112⅝	105¾	$100	Duquesne Lt.7s pfd	40	112	112	112	112	0
80	80	110½	90	25	Fayette County Gas	.....	.....	.....	.....	.....	.....
33½	26¾	45½	32¼	25	Lone Star Gas.....	1,470	45	45¼	44½	45	0
33¾	28¾	37½	31	25	Ohio Fuel Corp....	18,377	34⅞	*37¼	34¾	35¾	+1¼
16½	11⅝	16¼	12⅜	1	Ohio Fuel Oil.....	705	15	15	15	15	+1
28½	22⅜	32½	26	25	Oklahoma Nat. Gas	4,113	32	*32¼	31	31	—1
9¾	6	8¾	5	5	Pittsburgh O. & G..	727	5⅝	5⅝	5¼	5⅝	0
10¼	6	8½	6¼	10	Salt Creek Cons....	3,645	7	8⅜	7	8	+1¼
16¼	8	13⅜	8¾	10	Tidal Osage.....	500	11¾	11¾	11¼	11¼	+ ¾

Pittsburgh Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Nov. 6 Sales	First	High	Low	Last	Ch'ge
.....	.....	18½	18½	....	Central Ky. Gas...	.....	.....	.....	.....	.....	.....
1	.20	2¼	.60	$5	Colombia Synd....	.....	.....	.....	.....	.....	.....
.....	.....	15	13	N.P.	Devonian Oil.....	.....	.....	.....	.....	.....	.....
.70	.25	.60	.15	5	Duquesne Oil.....	.....	.....	.....	.....	.....	.....
9½	5½	9	5½	10	Forest Oil.....	.....	.....	.....	.....	.....	.....
66¾	57	78½	64	25	Gulf Oil Corp.....	.....	.....	.....	.....	.....	.....
23¾	21	.....	.....	N.P.	International Pet..	.....	.....	.....	.....	.....	.....
.....	.....	12¾	8⅜	N.P.	Leonard Oil & Dvlp	7,650	7½	10½	7	10¼	+2¼
6	5	.....	.....	$10	Marshall Oil.....	.....	.....	.....	.....	.....	.....
.77	.35	.47	.26	10	Omar O. & G.....	1,000	.26	.26	†.26	.26	.....
8	3⅝	7	3	5	States Oil.....	.....	.....	.....	.....	.....	.....
.....	.....	4	1 11/16	$1	Texon Oil & Land..	37,800	3½	3¾	3	3	— ⅛
14	10	11	9	10	Tidal Osage.....	1,100	10¼	10¼	10	10	— ¼

*New High †New Low xEx-Dividend

Shell Union Oil Reports Increased Earnings

NEW YORK, Nov. 6.—Shell Union Oil Corp., holding company for all Royal Dutch-Shell properties in the United States except the New Orleans Refining Co., reports for the third quarter of 1925 net profit of $8,150,855 after depreciation and depletion but before federal income tax. This sum equals, after dividends on the preferred stock, 78 cents a share on the no par common. In the third quarter of 1924 the corporation netted 57 cents a share on the common before federal taxes.

Profits for the first three quarters of 1925 were $1.89 a share on the common as compared with $1.66 in the first three quarters of 1924.

Consolidated income accounts for the two third quarters compare:

	1925	1924
Total inc	$15,045,095	$12,154,947
Deprec., depl., etc.	6,894,240	6,109,929
*Net profit	$ 8,150,855	$ 6,045,018
Preferred div.	275,256	285,132
Common div..	3,500,000	2,500,000
Surplus	$ 4,375,599	$ 3,259,886
P & L surplus	27,840,288	21,135,326

*Before federal taxes.

Consolidated income accounts for the two three-quarter periods compare:

	1925	1924
Total inc	$38,963,366	$35,607,673
Depr., depl., etc.	19,257,503	18,096,970
*Net profit	$19,705,863	$17,510,703
Pfd. divs.	785,931	880,884
Com. divs.	10,500,000	7,500,000
Surplus	$ 8,419,932	$ 9,129,819

*Before federal taxes.

Financial Notes

General Petroleum Corp.—Special meeting of stockholders will be held Nov. 12 to vote on issuance of $18,000,000 first mortgage bonds.

Carl H. Pforzheimer & Co.—On Oct. 15 Walter and Arthur Pforzheimer retired from this firm of Standard Oil stock specialists and J. William Smallwood was admitted.

Standard Oil Co. of Nebraska.—Extra dividend of $10 a share declared payable Dec. 21 to stock of Nov. 20, record in addition to regular semi-annual dividend of $5 a share.

Standard Oil Co. of New York.—Stockholders approve increase in capital stock from $235,000,000 to $375,000,000. Shares are of $25 par value each.

Canadian Oil Cos., Ltd.—Earnings are reported to be about $400,000 more than last year and common stock may soon be placed on 6 per cent dividend basis. This would require $96,000 a year. This company is a subsidiary of the National Refining Co., Cleveland, and is both a refiner and distributor in Canada.

The Oil Industry Exchange

Positions Wanted

Refinery Superintendent

Sixteen years experience. Employed, desires new connection. Thoroughly acquainted with modern equipment. Can get favorable results. A-1 references.

Box 466.

Situations Open

Salesman Wanted

Experienced, with knowledge of lubricating oils to jobbing trade. Good prospects for future. Acquaintance with Illinois, Wisconsin, Indiana, Iowa or Michigan jobbers desirable.

State age, experience and references. Replies strictly confidential.

Box 461

Are You an Experienced Oil Man?

If you are, you are bound to be interested in the position which we are now about to fill.

We are a large oil company, operating over an extensive territory, and are now about to enter the Philadelphia field, selling petroleum and all its products, including gasoline.

We want a Manager for our Philadelphia business, one familiar with the oil industry generally, and with the Philadelphia market specifically, in similar capacity. Salary is in keeping with the importance of this position and only men of large Philadelphia oil company experience need apply.

Box 467

Wanted to Buy

Fifteen or Twenty-Thousand-Gallon Gasoline Tank Wanted. Will pay cash, but must be cheap and in good condition. Also three compartment six thousand-gallon oil tank. Harris Motor Company, Barnesville, Ga.

Bulk Station in Iowa Wanted. Prefer filling station attached. Box 468.

For Lease

For Oil Lease 22,000 acres in a solid body, lying in northern part of Upton and Reagan counties, Texas, within 20 miles of one of the largest American oil fields. If interested, write or wire Live Stock Exchange, Inc., Des Moines, Iowa.

For Sale

Two Henry Vogt Machine Co.'s 20-ton Exhaust Steam Absorption Refrigerating Systems, for sale, complete. In first-class condition. Box 272.

For Sale

A well established and continually growing oil jobbing business in the South doing a very fine volume of business. $20,000 cash will handle, balance of $22,500 at rate of $1250 per month.

Box 469
Care, National Petroleum News

Business Opportunities

The wide experience of R. P. Humes and L. H. Deatherage, formerly Manager of Wholesale Sales, and Division Sales Manager, respectively, for Transcontinental Oil Co., is available to oil jobbers through the formation of the Arkoma Petroleum Co., 708 Mid-Continent Bldg., Tulsa, to operate as buyers of refined oils and particularly lubricating oils for the jobbing trade.

PETROLEUM PRODUCTS BOUGHT ON COMMISSION

Make this office your Tulsa buying office on a commission basis.

Let's Exchange References

DALE W. MOORE

532-533 Mayo Bldg., Tulsa, Okla.
Telephones: 3-4177 and 3-4178.
L. D. 136

Manufacturers of
Grease, Oil and Soap!

COMPOUNDING EQUIPMENT

We help you develop trade marked brands of greases, lubricants, soaps, dips, sprays, disinfectants, etc.

F. E. Martin & Co.
Lake Bluff, Ill.

Miscellaneous

WHAT IT COSTS

For "Position Wanted" advertisements—5 cents per word. Minimum cost $1.00. All other classified advertising—10 cents per word. Minimum cost $3.00. Advertisements set in special type or with border—$4.00 per column inch. Copy must reach us not later than Friday preceding date of issue. All advertisements carried on this page are payable in advance.

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